

HTC's New
Number One

TiVo Mini Takes on
the Whole Home

SXSW
in Pictures

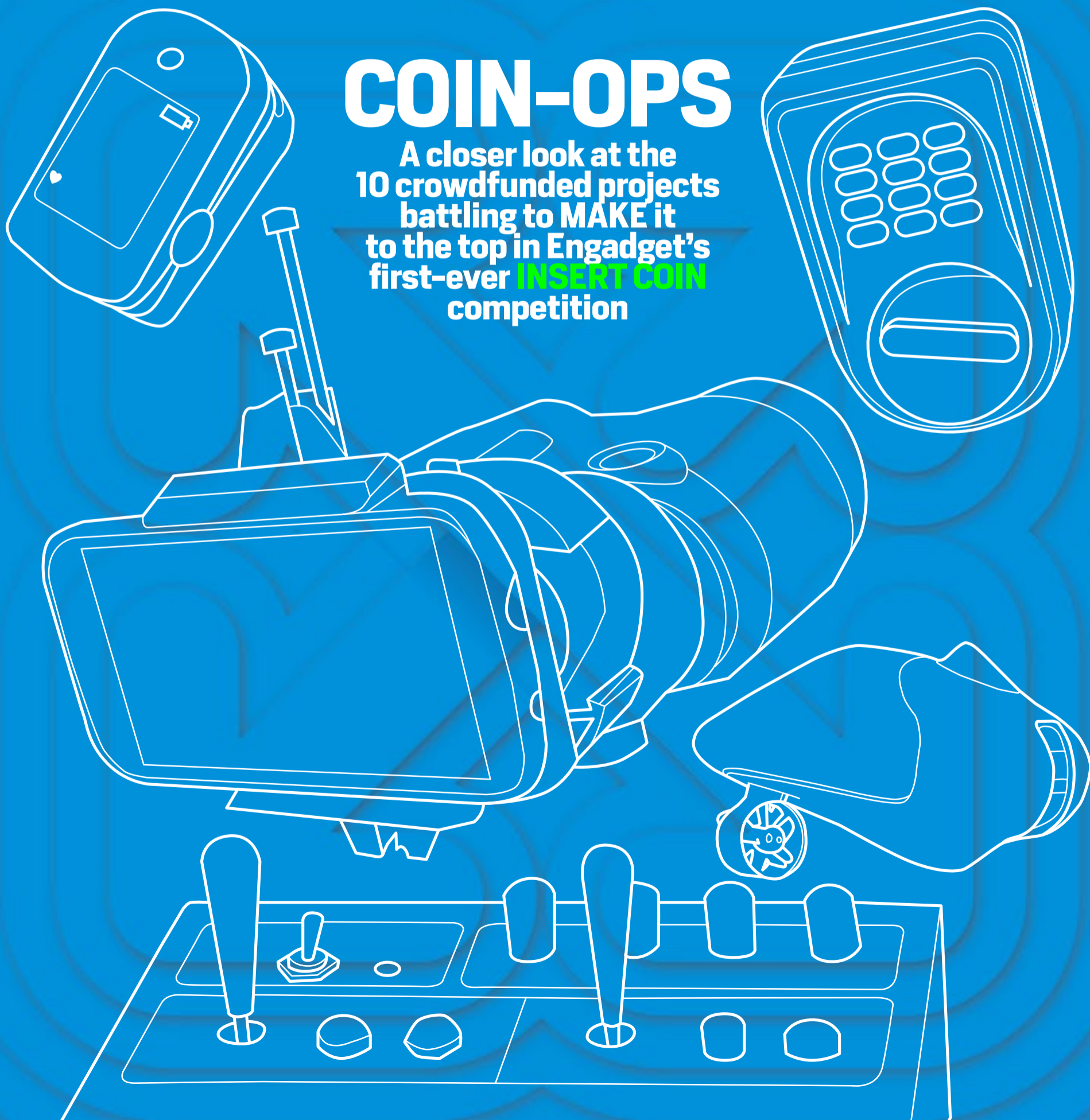
DISTRO

031513 #82

engadget[®]



COIN-OPS

A closer look at the
10 crowdfunded projects
battling to MAKE it
to the top in Engadget's
first-ever **INSERT COIN**
competition





Let's Go Places

  #LetsGoPlaces Because inspiration is all around us.

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**Let's
Go
Places**

ISSUE 82

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03.15.13

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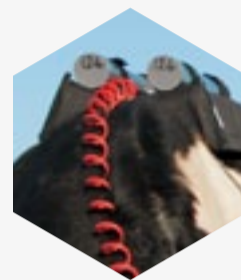


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By Brian Heater

COIN-OPS
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ESC



VISUALIZED
Top Tech
in the Field



Q&A
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IRL
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REHASHED
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TIME MACHINES
Robots Go Nuts



THE FAMILIAR 4

DISTRO
03.15.13

EDITOR'S
LETTER



ANOTHER WEEK, another mega Android smartphone release! This time it's Samsung's eagerly awaited Galaxy S 4. Yes, we've lost the Roman numerals, as their marketing certainly hinted, but otherwise, not a lot has changed. In fact, even we experts, trained in the art of cellphone identification are going to have a hard time telling the difference between this new Galaxy S and its predecessor from a distance.

It is slightly larger, with a 5-inch, 1080p OLED display, but there is at least a bit more intrigue on the CPU side. Samsung reps have been a little cagey on what's powering the thing, but at least one will have an eight-core Exynos 5 chip — though to be fair it's actually dual four-core processors, rather than eight equal cores. There are four A7 cores married to a quartet of A15s, an interesting bit of digital polygamy that could result in a very efficient CPU. We shall see. That'll be paired with 2GB of RAM.

And then, of course, there's the design. The GS4 looks very much to

be cut from the same, plasticky mold as the GS3 before it, meaning the HTC One will retain the crown as the nicest looking and nicest feeling Android device — for the moment.

Moving from hardware to software, a big shake-up at Google could have big implications for the future of Android. Andy Rubin has stepped down from his position as Android lead to follow his entrepreneurial spirit to new avenues — avenues within the company, that is. Taking over the reins of Android is Sundar Pichai, who currently oversees the Apps and



“Yes, it’s effectively a giant tablet, though we don’t expect off-plug longevity...”



Dell's XPS 18 doubles as a monster slate and an all-in-one.

Chrome projects. Yes, from a business hierarchical standpoint at least, Android and Chrome are now perfectly aligned. Android running within Chrome OS now feels like a lock, which could make that touchscreen on the Pixel a wee bit more useful.

Finally on the Google front, the company opened registration for the Google I/O developer conference this year — and then promptly closed it less than 50 minutes later. That’s about twice as long as last year’s conference took to sell out, meaning either Google found some more seats or slowed down the ticket-acquisition process.

After what feels like an age, we now have a price and a date for the US release of the BlackBerry Z10. The

phone will hit AT&T and Verizon on March 22nd priced at \$199, just as expected and putting it on a par with some really great phones like the Galaxy S III and the iPhone 5. And, of course, with the HTC One and Galaxy S 4 coming soon, it has stiffer competition than ever.

Dell took the wraps off its XPS 18, an 18.4-inch all-in-one touchscreen desktop with up to an Intel Core i7 CPU, 8GB of RAM and a 512GB SSD. That all sounds tame enough, but what makes this particularly interesting is that it also has a battery. Yes, it’s effectively a giant tablet, though we don’t expect off-plug longevity to be more than a couple of hours. And, at five pounds, you probably won’t want to take it far anyway.




“...The company can focus its efforts on churning out more units of the Model S.”

The TiVo Mini went on sale this week for just \$99.99, offering the ability to extend your TiVo Premier content and all its various lists to other rooms. That seems reasonable enough, but TiVo is doing its thing and charging another monthly fee to use the Mini: \$5.99. Or, you can cough up \$149.99 and use the thing fee-free. At \$250 total, it suddenly feels like less of a value, but I won't spoil the review for you, which is waiting patiently for you in this issue.

Finally, Tesla indicated that it is delaying its Model X SUV for another

year. The all-wheel-drive version of the Model S with the gullwing doors and somewhat portly proportions had originally been due this year, but now it's intended for a 2014 arrival. While that's a bit disappointing, it does mean the company can focus its efforts on churning out more units of the Model S. I'll take mine in blue, thanks.

In this week's Distro we have Brad Molen's eminently comprehensive review of the HTC One, the best-looking Android smartphone to date and, certainly, one of the best-looking handsets of all time. We'll also bring you Ben Drawbaugh's review of the TiVo Mini and give you a visual tour of all the SXSW insanity from Austin. We're taking a closer look at the 10 finalists from our Insert Coin: New Challengers competition, which will come to a head this weekend at our first Expand conference in San Francisco. I hope to see many of you there, but for those who aren't able to make it, we'll be live-streaming basically the entire show. It's going to be a great event, and whether you join us physically or virtually I'm pretty sure you won't want to miss it. 



TIM STEVENS
EDITOR-IN-CHIEF,
ENGADGET



GOLD RINGER, SILLY PEOPLE AND THE AD ENDGAME



Touch article names
to read full threads

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INBOX



VERTU TI
ISSUE 81,
MARCH 8TH, 2013

“Concierge service for \$2800/year? Better come with 200 spa treatments and gold club membership.”

– FLYGUY29

“\$9,600? Damn, for that much you can buy 11 64GB unlocked Global iPhone 5s with some spending money left over or 27 1/2 16GB Nexus 4s or 21 Nokia Lumia 920s (AT&T Version, Unlocked)

“I thought it was going to transform into Optimus Prime.”

– RAZIRUELAS

or 13 of the Global versions...

Expensive phone is expensive.”

– ICYROCK1

TABLETS OFFER A NEW
CHOICE FOR VOICE

ISSUE 81,
MARCH 8TH, 2013

“The thing that people don’t seem to get is that the Note 8.0 is *not* a phablet. Many tablets have phone functionality

(Note 10 and others), but it is just a bonus.”

– IMJUSTCHING

“Use Bluetooth. Silly people.”

– DULL

THE DARK SIDE
OF GOOGLE GLASS

ISSUE 81,
MARCH 8TH, 2013

“Sure some folks will wear them to geek out, but I see these contrap-



tions mostly as utility gadgets for the workplace. Police, warehouse, surgeons, pilots, gamers; but I honestly cannot [think of] anything but a parallel universe where people would just wear these ridiculous things to just walk around the house or go get a coffee.”

– XEX

“Endgame: Ads literally in your eyes.”

– BURNER

“You are absolutely right. And I believe the early years of Google Glass will consist of people looking slightly off to the left as they read their status updates during a conversation. Then the other person will proceed to ask, ‘Hey, are you listening to me?’ To which, the Glass-wearer will instantly replay the last 10 seconds and reply, ‘Yes, yes I was.’ There will be a lot of that going on. It will become a vapid society.”

– MICHAELYI

BACK TO BLACKBERRY:
30 DAYS WITH THE Z10
ISSUE 81,
MARCH 8TH, 2013

“Good conclusion to your month-long review.

I have similar issues with the conversation view in HUB along with the lack of system monitoring (data, battery, screen time, etc.).”

– BOY

“It’s funny that you compare it to iOS and Android, yet its current competitor is WP. Before they deal with the top players they need to beat WP. WP has been winning a lot of corporate contracts because it can easily integrate in a Windows environment.”

– THEFLEW



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EYES-ON

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BLUE MICROPHONES SPARK DIGITAL

STUDIO QUALITY ON THE GO

Mobile-recording gadgets aren't usually known for eye-catching aesthetics, but Blue Microphones has a knack for cranking out well-designed peripherals in addition to their pro-level offerings. One such device is the Spark Digital: a USB- and iOS-compatible unit that touts Blue's signature build quality and premium stylings — right down to the tracks it captures.

THE DAMAGE: \$199

PHOTOGRAPHS BY WILL LIPMAN



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BLUE MICROPHONES SPARK DIGITAL



SOLID BUILD

Like many of Blue's audio accessories, the Spark Digital is clad in a metal frame that adds some bulk, but also a high-end look and feel to the studio-grade gadget.

PHOTOGRAPHS BY WILL LIPMAN



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EYES-ON

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BLUE MICROPHONES SPARK DIGITAL



iOS-READY

For recording while on the road, the unit connects to both iOS devices and PCs to track all of those hooks and riffs for future fine-tuning.



PHOTOGRAPHS BY WILL LIPMAN

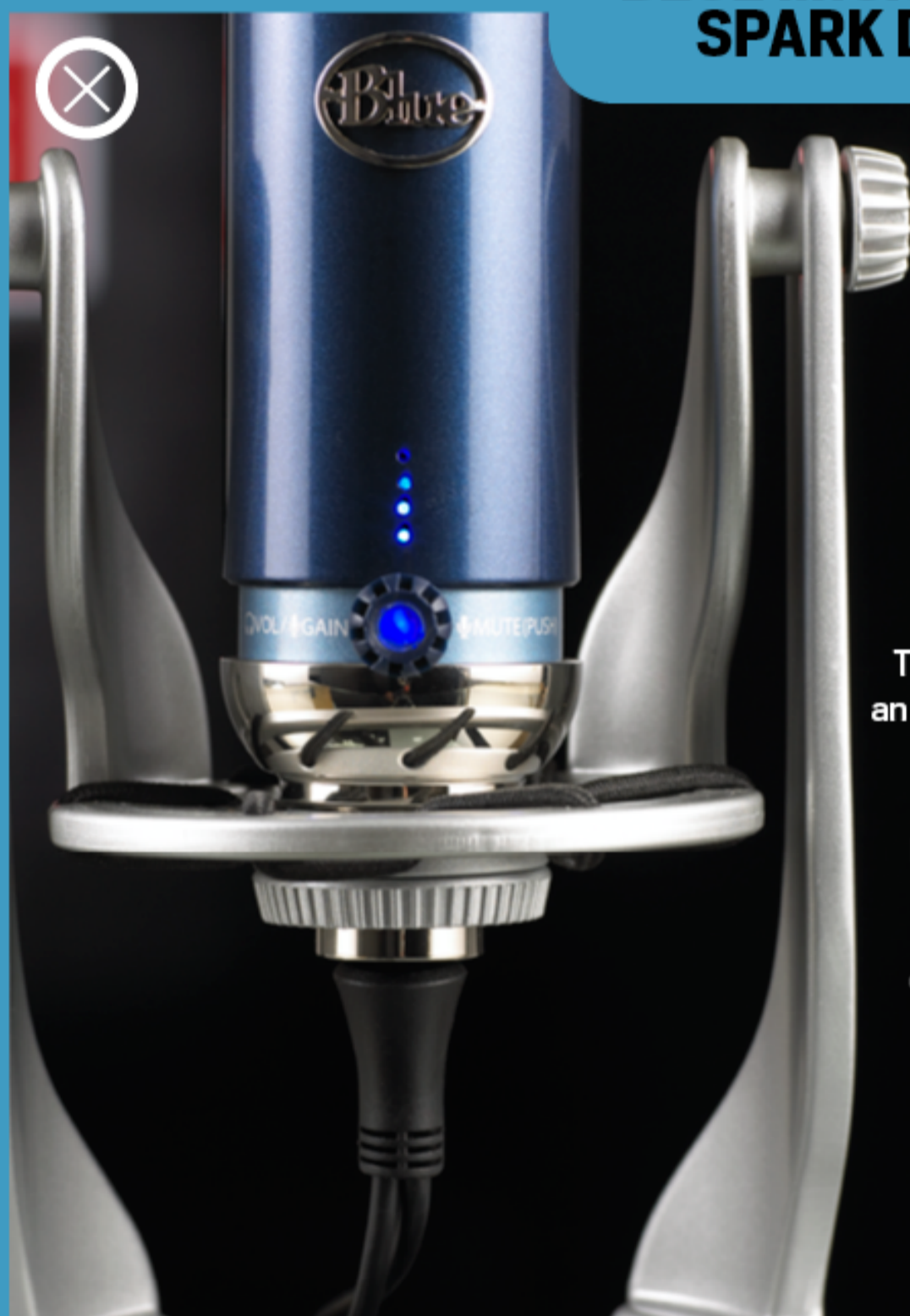


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BLUE MICROPHONES SPARK DIGITAL

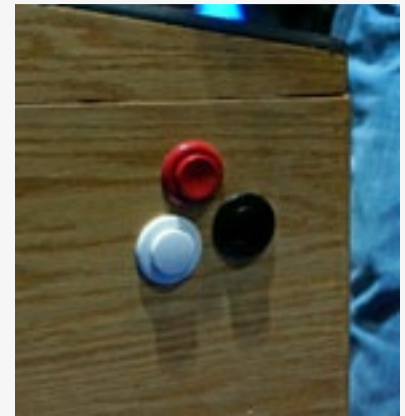


SIMPLE CONTROL

The Spark Digital wields an on-board combination mute button and gain control to keep mid-podcast tweaks within reach. A zero-latency headphone jack splits off the requisite cables for accurate session-monitoring as well.

PHOTOGRAPHS BY WILL LIPMAN





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PRICE: \$9,500-\$10,000

AVAILABILITY: TBD

THE BREAKDOWN:
A MODULAR PINBALL
MACHINE AND
HOBBYIST-HACKER
DREAM, COMPLETE
WITH PROPRIETARY
MICROCONTROLLER.

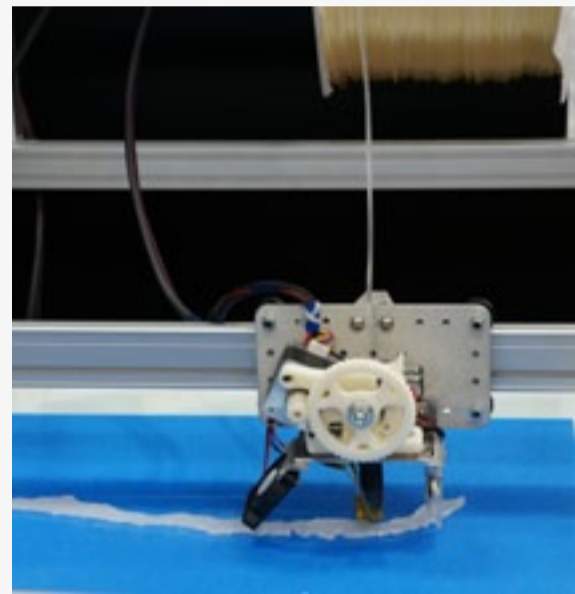
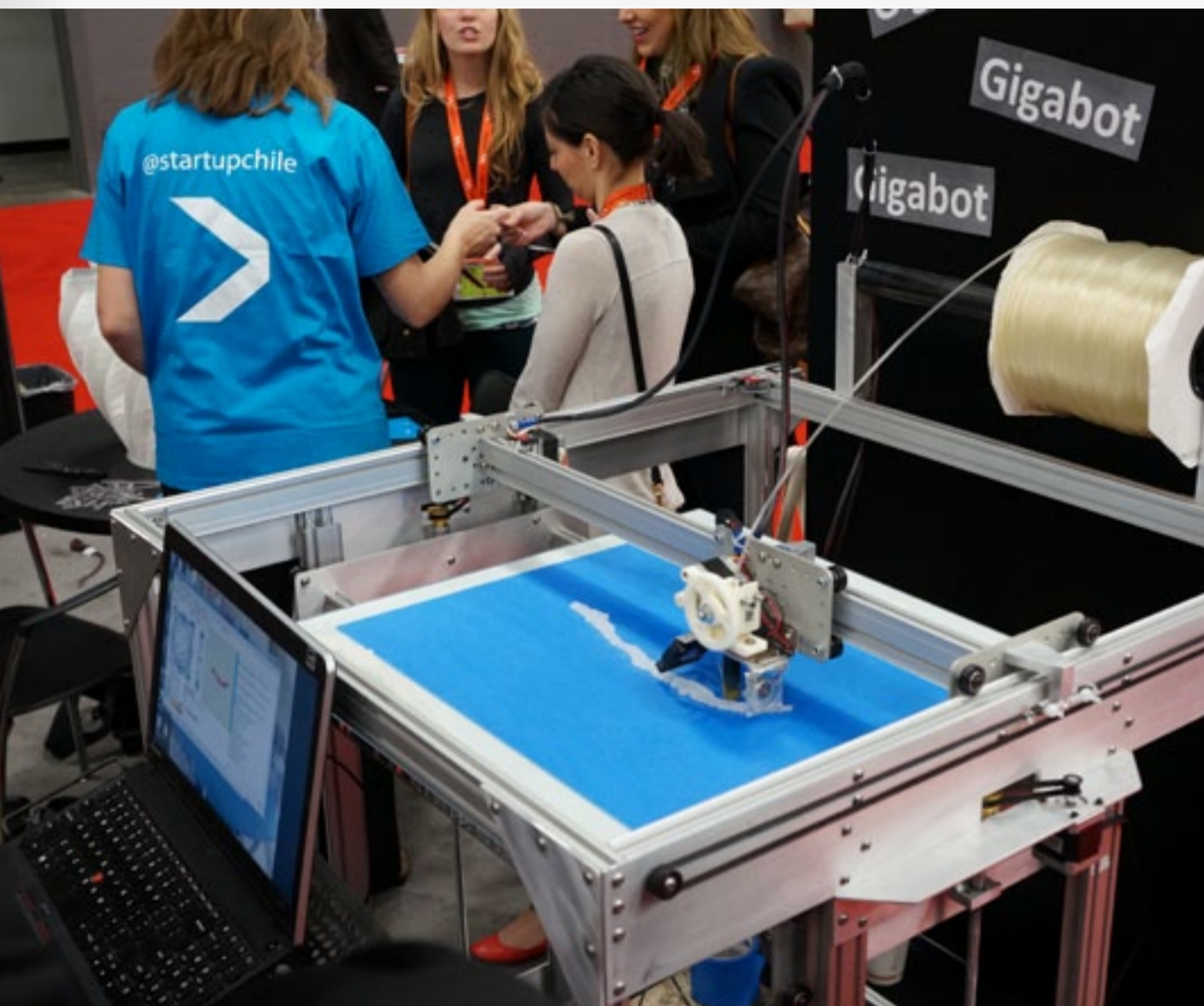
MULTIMORPHIC P3 PINBALL MACHINE

One of the more compelling examples we've seen of startups looking to get into the pinball game is the offering from Multimorphic, an Austin-based company showcasing a prototype at SXSW Interactive's Game Expo. The P3 is interesting for a number of reasons. First, and arguably most importantly, is the modular nature of the machine. If you take a look at the (still-unfinished) sides of the cabinet, you can see a big slit down the center, where the top can be lifted off and replaced. The idea is to essentially offer a platform to both developers and at-home hackers to create their own games atop what is essentially a clean slate. Customization is helped along by the presence of a large display in the middle, which can be tricked out for different titles — the unit will ship

with two at launch.

The still-unfinished system remains a bit buggy at this early stage. Though we have to admit it was pretty cool watching its makers navigate through the menus on its display using the two sets of three buttons on each side. Still, the machine feels quite solid, and certainly has a more authentic weight to it than those Stern home machines. We do miss the more complicated playfields of pro-machines, though that's one of the nice things about being able to customize these machines — you can set it to the level you want. Also worth noting is the fact that the machine utilizes the company's own proprietary P-ROC microcontroller, which lets users control pinball machines via USB, both for homebrewed systems and hacking older machines.





GIGABOT 3D PRINTER

The standard crop of 3D printers are all well and good, but what about those times when you need to print something really, really big? Gigabot's hoping to fill in that gaping void with a build envelope of 24 x 24 x 24 inches — 30 times the volume of a standard consumer device, by its maker's calculations. The device is a beast, naturally — and a metal one, at that. It's so big, in fact, that it can support a full-sized laptop sitting atop an attached arm.

The project is the brainchild of re:3D, an Austin-based startup, which has turned to Kickstarter to help bring the Gigabot into the world. In fact, the company has already surpassed its \$40,000 funding target. You can pick one of these up for a \$2,500 pledge, which gets you everything you need to build one at home.

PRICE: \$2,500

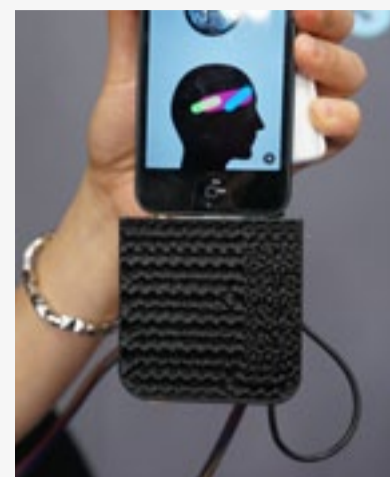
AVAILABILITY:
LATE 2013

THE BREAKDOWN:
SUPERSIZED 3D
PRINTING LOOKS
TO GET
KICKSTARTED
WITH THE
BEHEMOTH
GIGABOT.



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NEUROWEAR MICO HEADPHONES

PRICE: TBD

AVAILABILITY:
PROTOTYPE

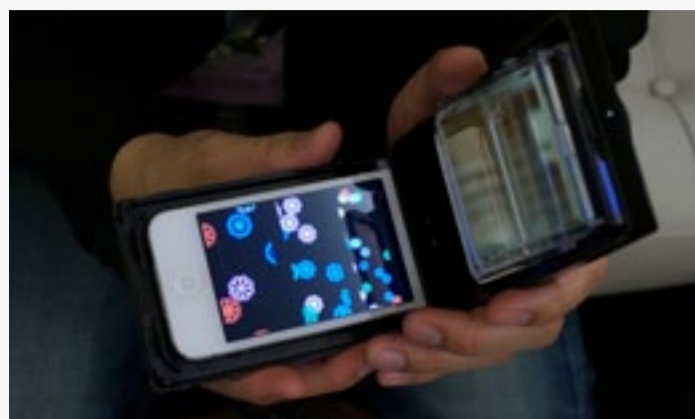
THE BREAKDOWN:
THE MICO CANS
SELECT SONGS
BASED ON YOUR
MOOD WITH A
FOREHEAD SENSOR
AND EARLOBE CLIP.

Neurowear, the company behind the Necomimi, which provided some of the more memorable moments at this year's CES, showed off its latest project, the Mico, which continues the company's core competency of letting people do stuff with mind waves. In this case, it's music control. A big white pair of headphones is connected to a sensor that rests on your forehead and a dangling clip for your earlobe (a la the Necomimi). The cans connect to your smartphone via Bluetooth, using your current mood to select a song from the company's app, which currently contains about 100 tracks. According to the company, the songs have been "neuro-tagged," based on its testing, to ensure that they match up to perceived

mood. If your mood changes, just give the phone a shake and it will clean the musical slate Etch-a-Sketch-style.

We can't really say how well they worked — songs were chosen after it determined that our mood was "focused," but it's hard to say if the whole thing is just kind of a crapshoot. The headphones are still in the early prototype stage — there's a big battery pack and a 3D-printed module for controlling the red LEDs on the side of the ears. Asked if we might ever see such a thing on the market, Mico's inventor told us they were coming in "the near future," whatever that might mean. The company's also mentioned the possibility of partnerships with apps like Spotify, to let users choose from a much larger catalog.





PALM TOP THEATER



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“Pepper’s ghost” isn’t the sort of phrase you hear very often at a show like SXSW. In amongst all the latest-generation technology, there aren’t too many folks discussing optical concepts hundreds of years old. But the idea is a driving force in the Palm Top Theater, an iPhone case that turns smartphone videos into a miniature 3D-viewing experience. The peripheral utilizes three small drop-down displays — the rear is a full mirror with two half mirrors in front

PRICE: \$36

AVAILABILITY: NOW AVAILABLE

THE BREAKDOWN: THREE MIRRORS MAKE AN IPHONE CASE A DIMINUTIVE 3D THEATRE WITH A VIDEO-CONVERTING APP IN TOW.

it, reflecting images from the phone display into what appears to be a three-dimensional object — and really, it’s a stunning little effect.


The Palm Top requires the use of a proprietary file format that essentially splits the displayed image or video into three parts. The company’s providing some video for users, as well as a converter app to make custom footage. The device is available now for around \$36 — not super expensive, though it’s hard to see such a device as anything but a niche product, especially since the opening makes for a fairly limited viewing space. It would be extremely cool to see this on a larger space, but in the meantime, you’re stuck with a little window into the technology.





UBE WIFI SMART DIMMER

Here's a cool little addition to the increasingly competitive world of home automation. Ube's got a WiFi Smart Dimmer that utilizes multi-touch functionality to control the lights in your house — use one finger to turn off a single light, or use two to turn off a set. The company picked SXSW as the venue to announce the forthcoming launch of customized gestures for other smart devices. In the example given to us by CEO Utz Baldwin, a user can input a “W” to turn on the sprinklers, or an “A” plus an upward swipe to turn on an alarm and an “A” plus a down swipe to disable it.

Sadly, the functionality won't be available for the launch of the first generation, though it's likely to come in time for the second generation, along with a software update for early adopters. Interested parties can support the company via Kickstarter right now — Ube's a bit over halfway to its goal of \$280,000, with a little over two weeks to go. 

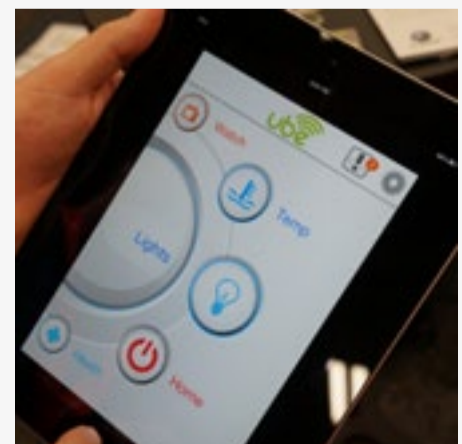
PRICE: \$69 & UP

AVAILABILITY:
SUMMER 2013

THE BREAKDOWN:
MULTI-TOUCH
GESTURES OUTFIT
THE UBE SMART
DIMMER FOR
CUSTOM LIGHTING
CONTROLS.



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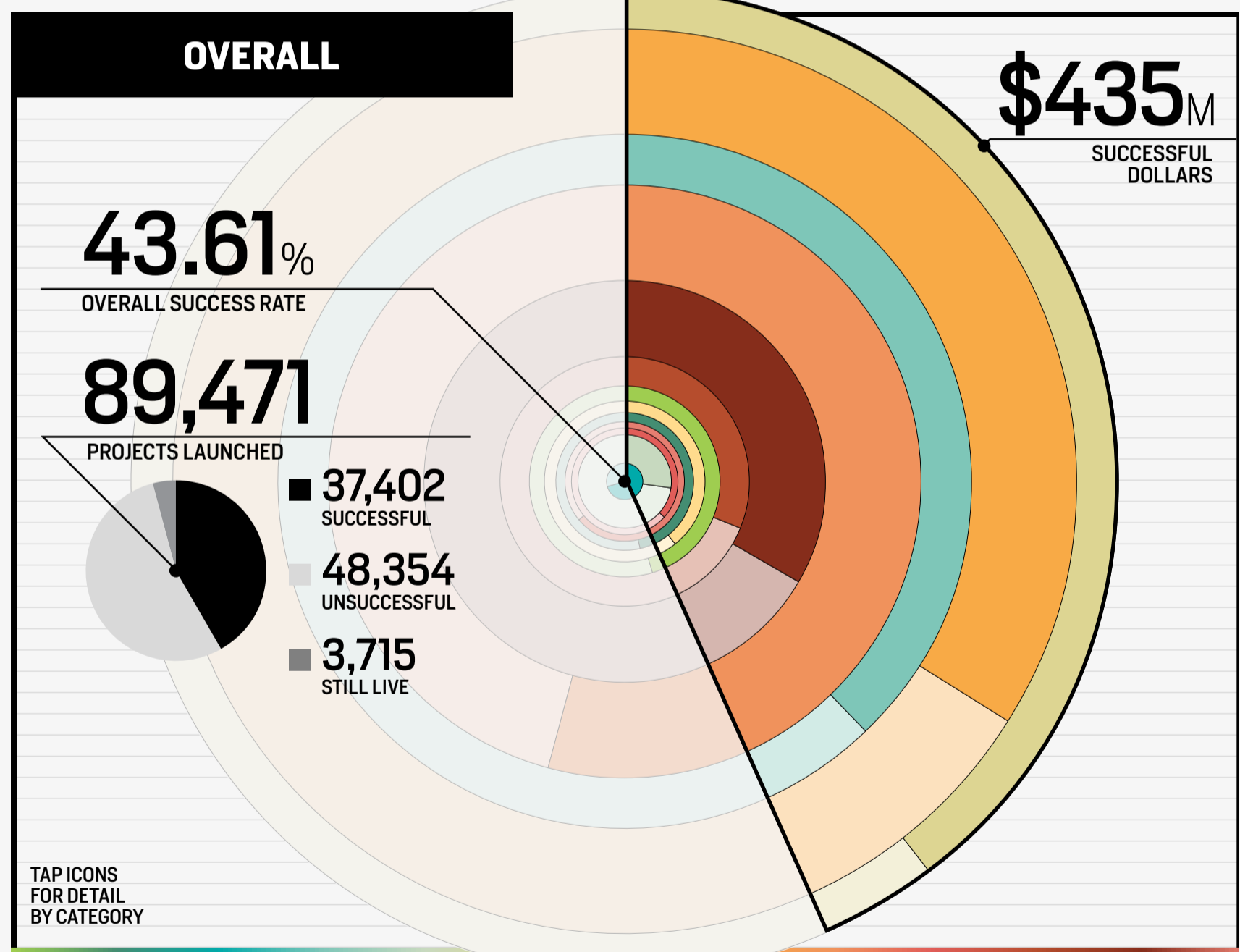


KICKSTARTER CRANKS IT UP

The name **Kickstarter** has become synonymous with all things crowdfunded lately and that business is booming. Matching this week's numbers against last June's, we found that more than 28,000 new projects have been launched in a little under a year — a 46 percent increase. Even with a deluge of new projects spanning

areas such as gaming, design and film, the success rate has changed less than 1 percent. In the last eight months, more than 12,000 projects were funded, pulling in record earnings — up 97 percent from June — and totaling \$214 million. We take a look at the breakdown to see how the various categories have fared. — *By Jon Turi*

KICKSTARTER FIGURES TO-DATE:



SOURCE: KICKSTARTER



All numbers as of March 11th at 11 AM ET. Success rate percentages were calculated by dividing successful projects by the number of projects that have already reached their deadline.

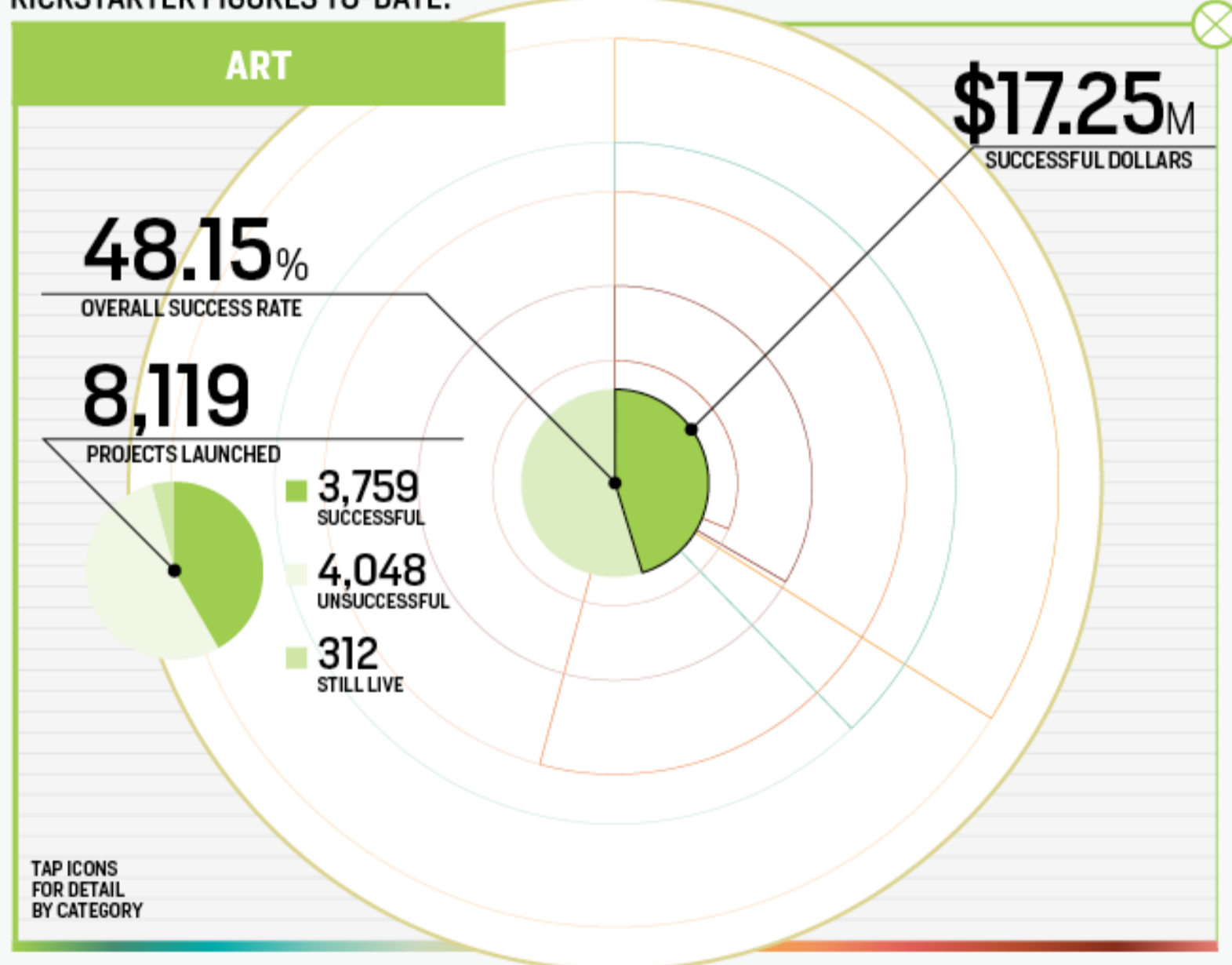


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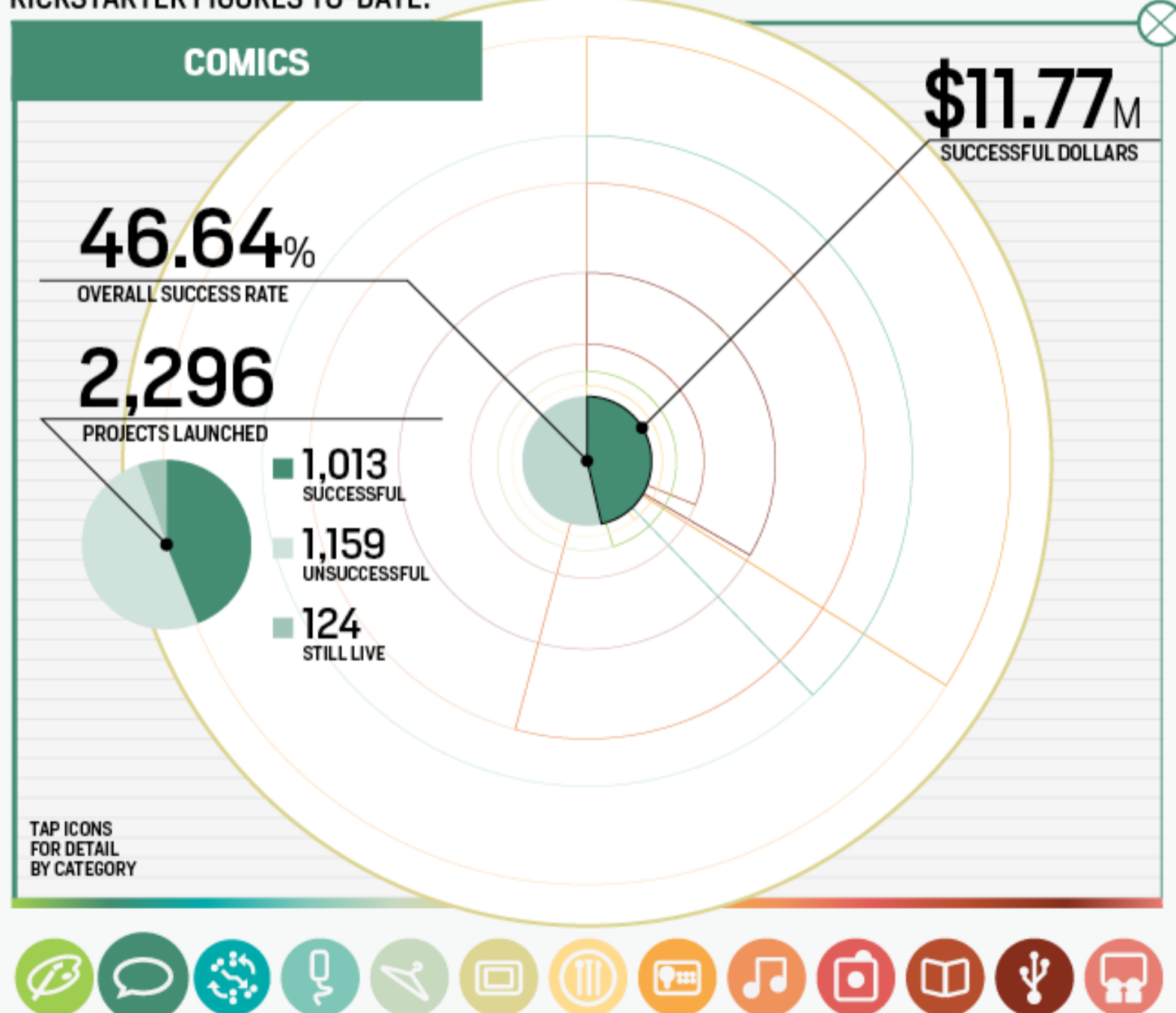


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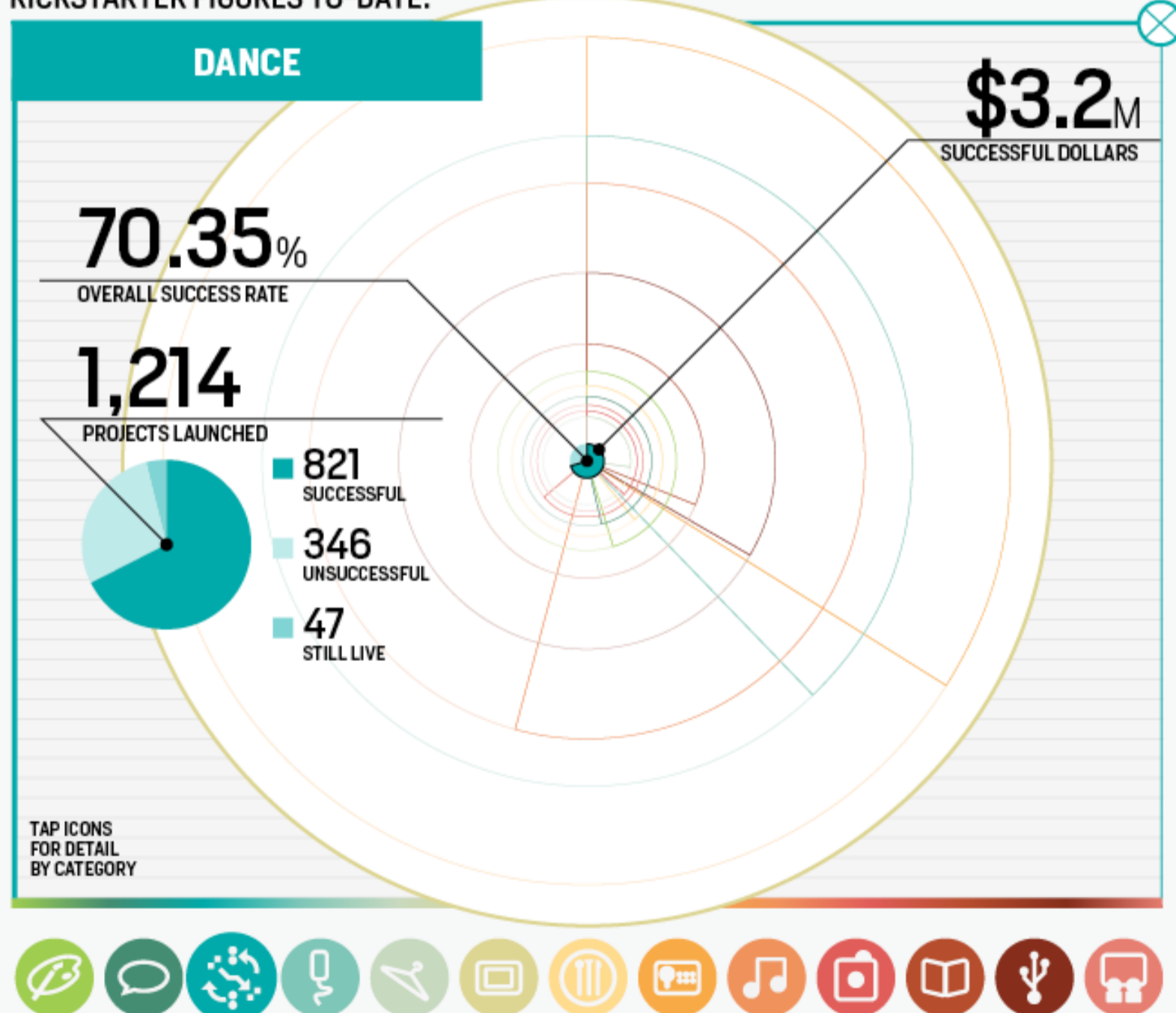


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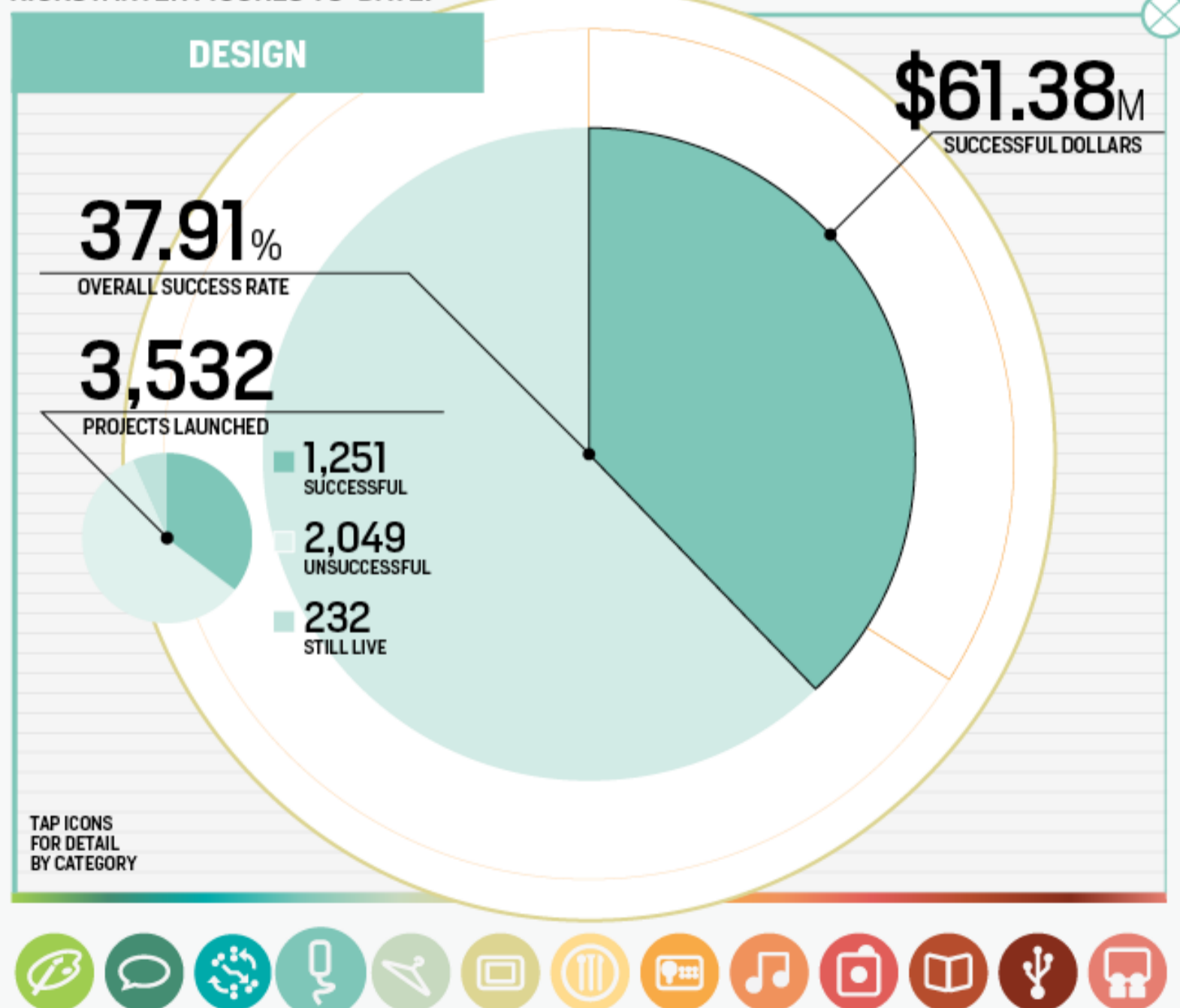


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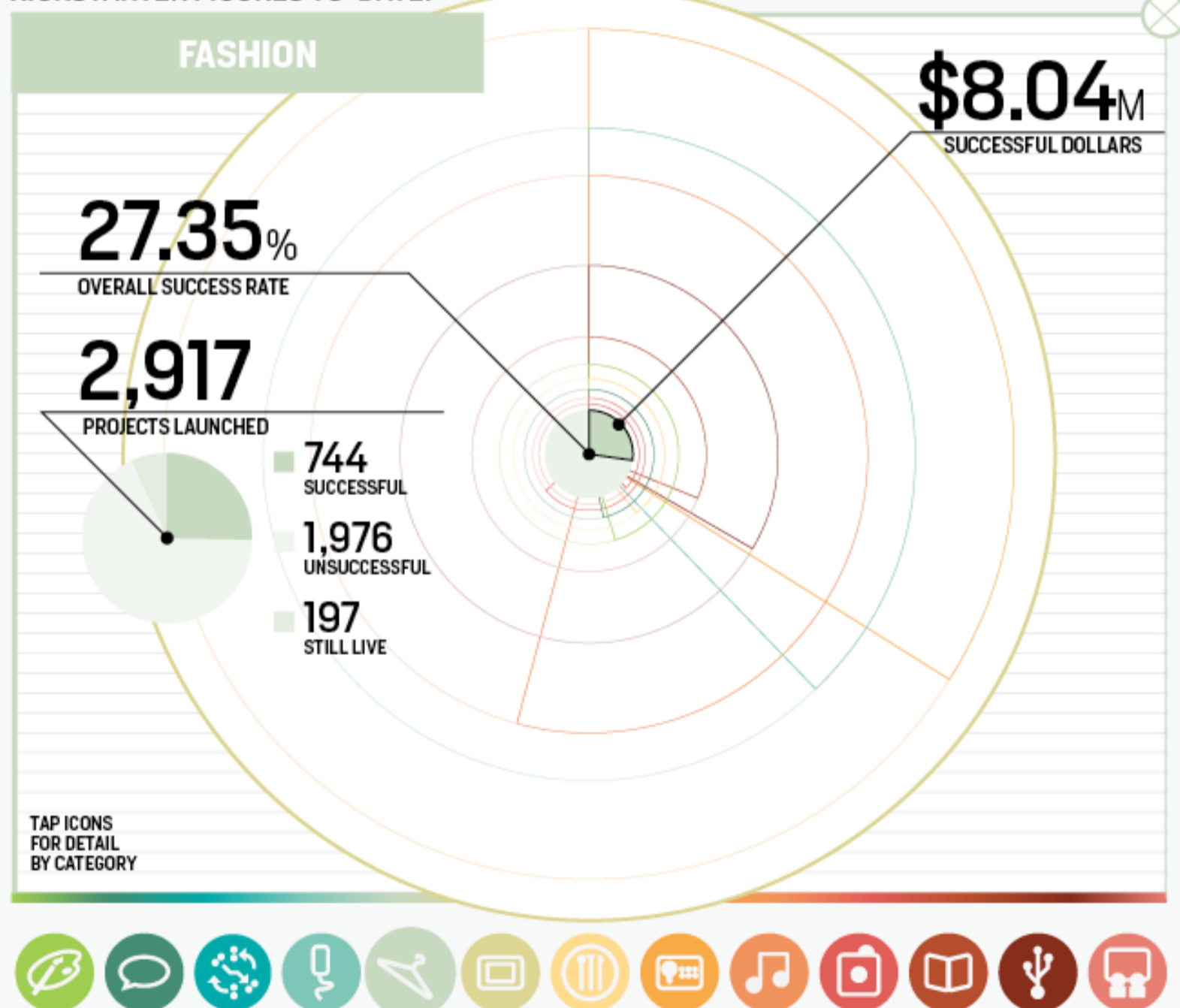


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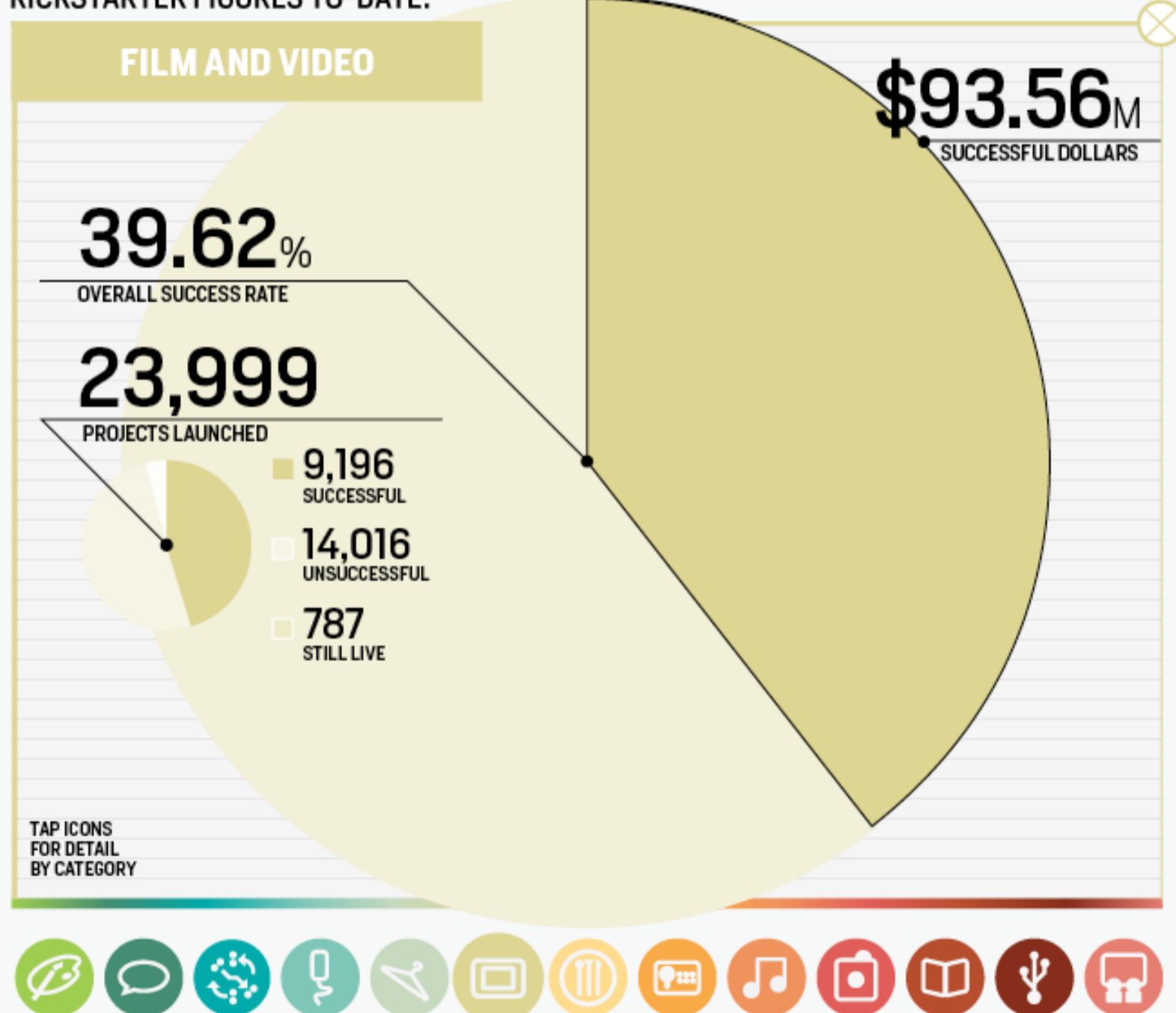


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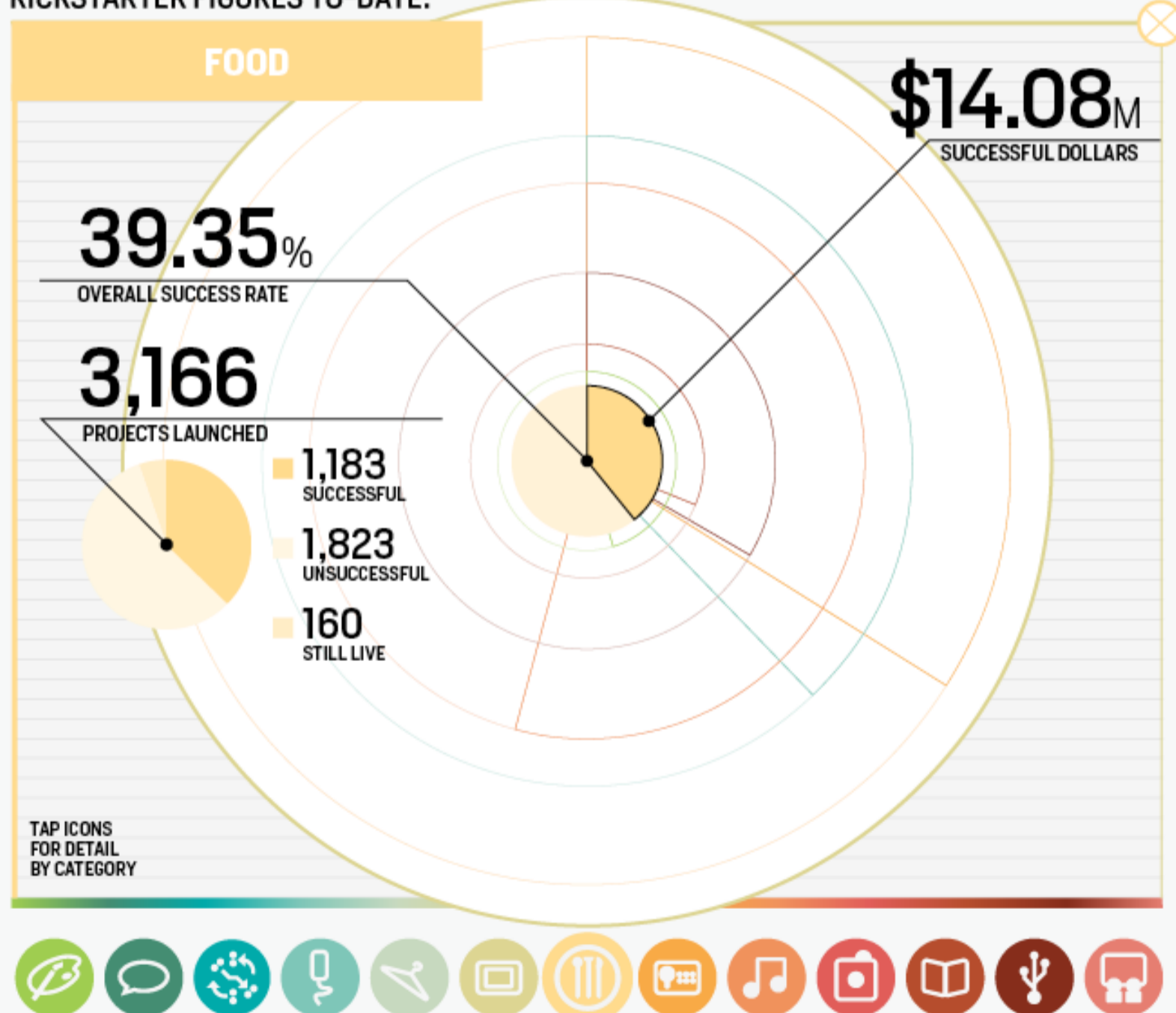


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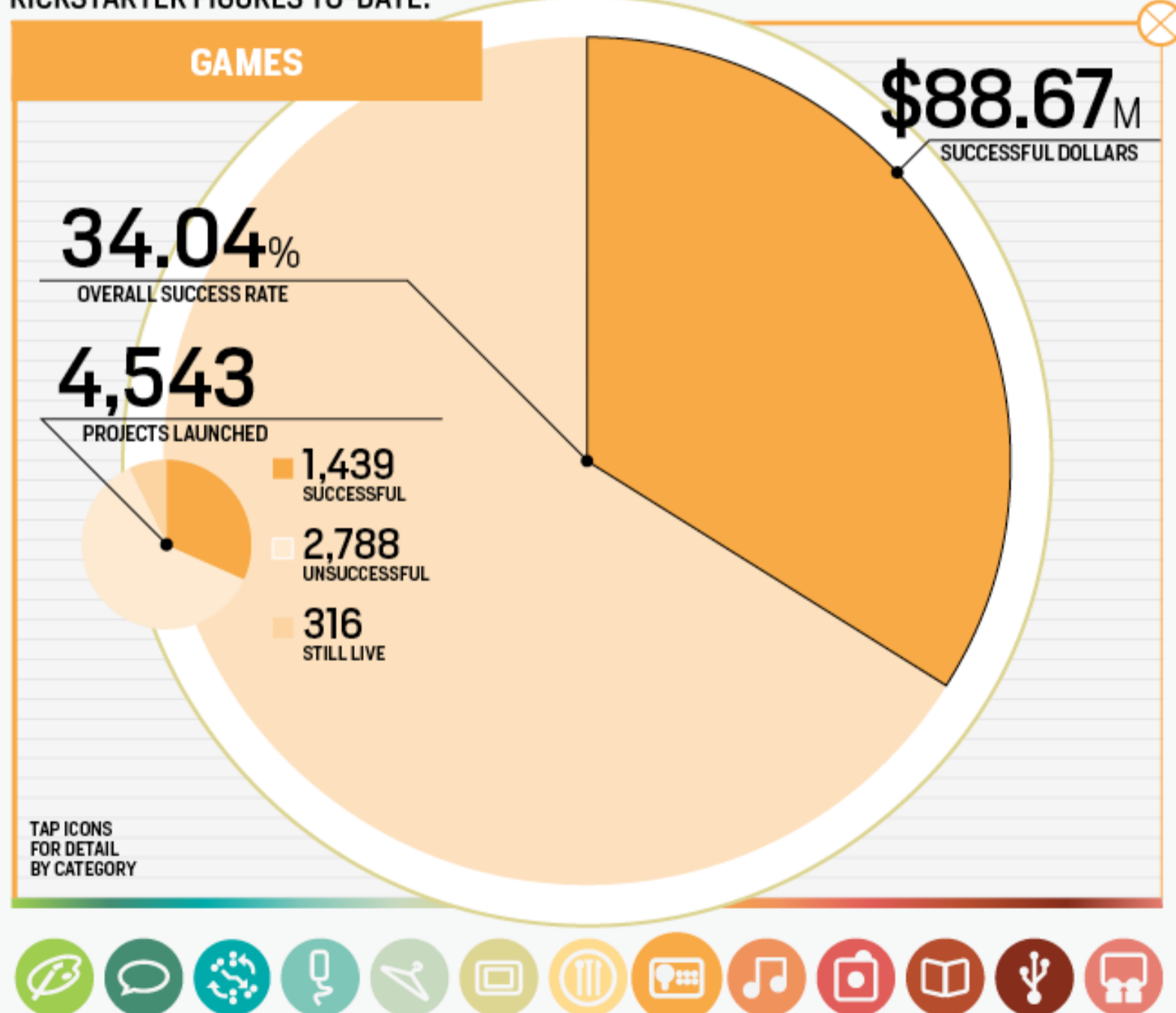


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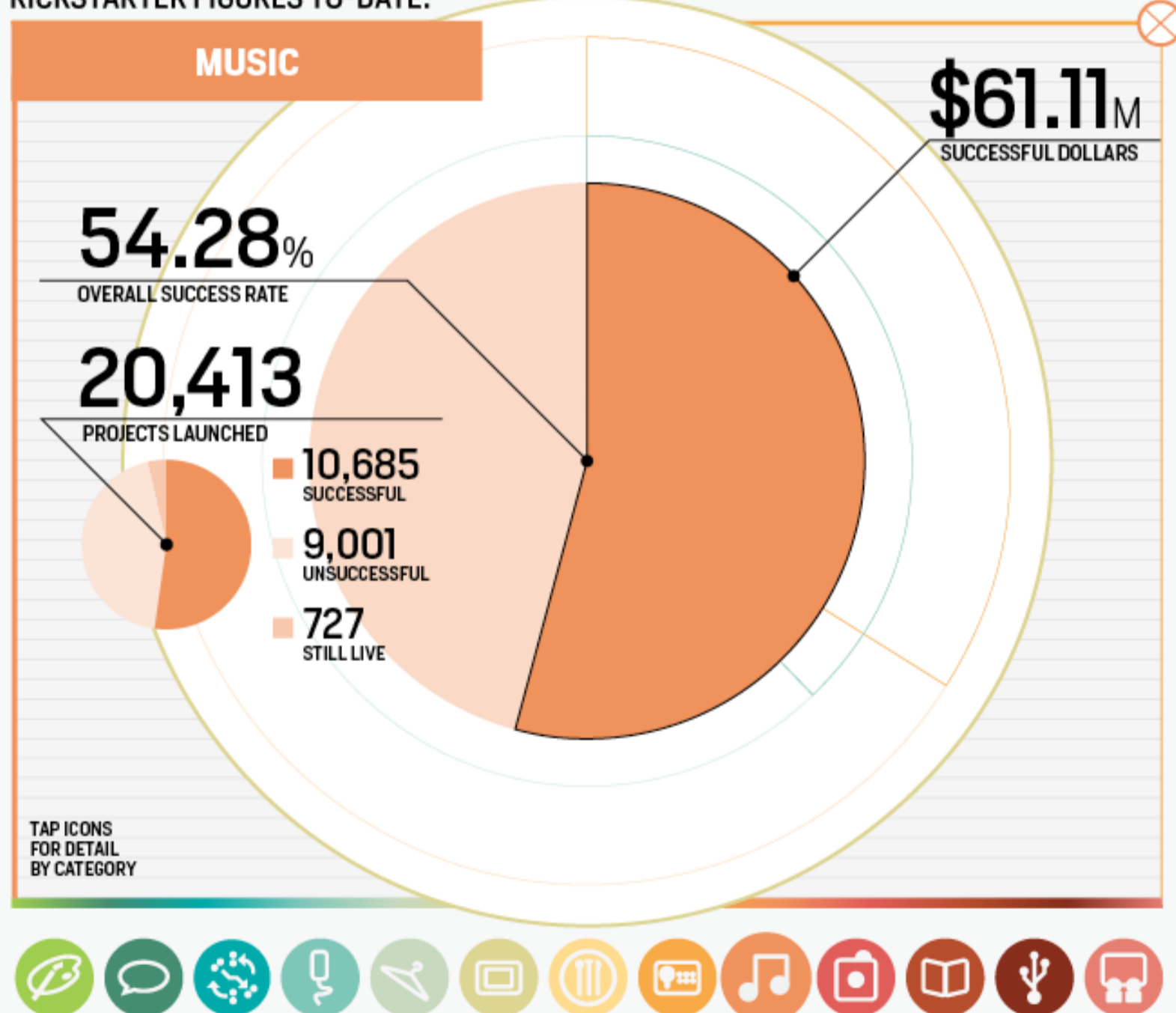


KICKSTARTER CRANKS IT UP

The name **Kickstarter** has become synonymous with all things crowdfunded lately and that business is booming. Matching this week's numbers against last June's, we found that they've launched more than 28,000 new projects in a little under a year — a 46 percent increase. Even with a deluge of new projects spanning

areas such as gaming, design and film, the success rate has changed less than 1 percent. In the last eight months, more than 12,000 projects were funded, pulling in record earnings — up 97 percent from June — and totaling \$214 million. We take a look at the breakdown to see how the various categories have fared. — *By Jon Turi*

KICKSTARTER FIGURES TO-DATE:



SOURCE: KICKSTARTER

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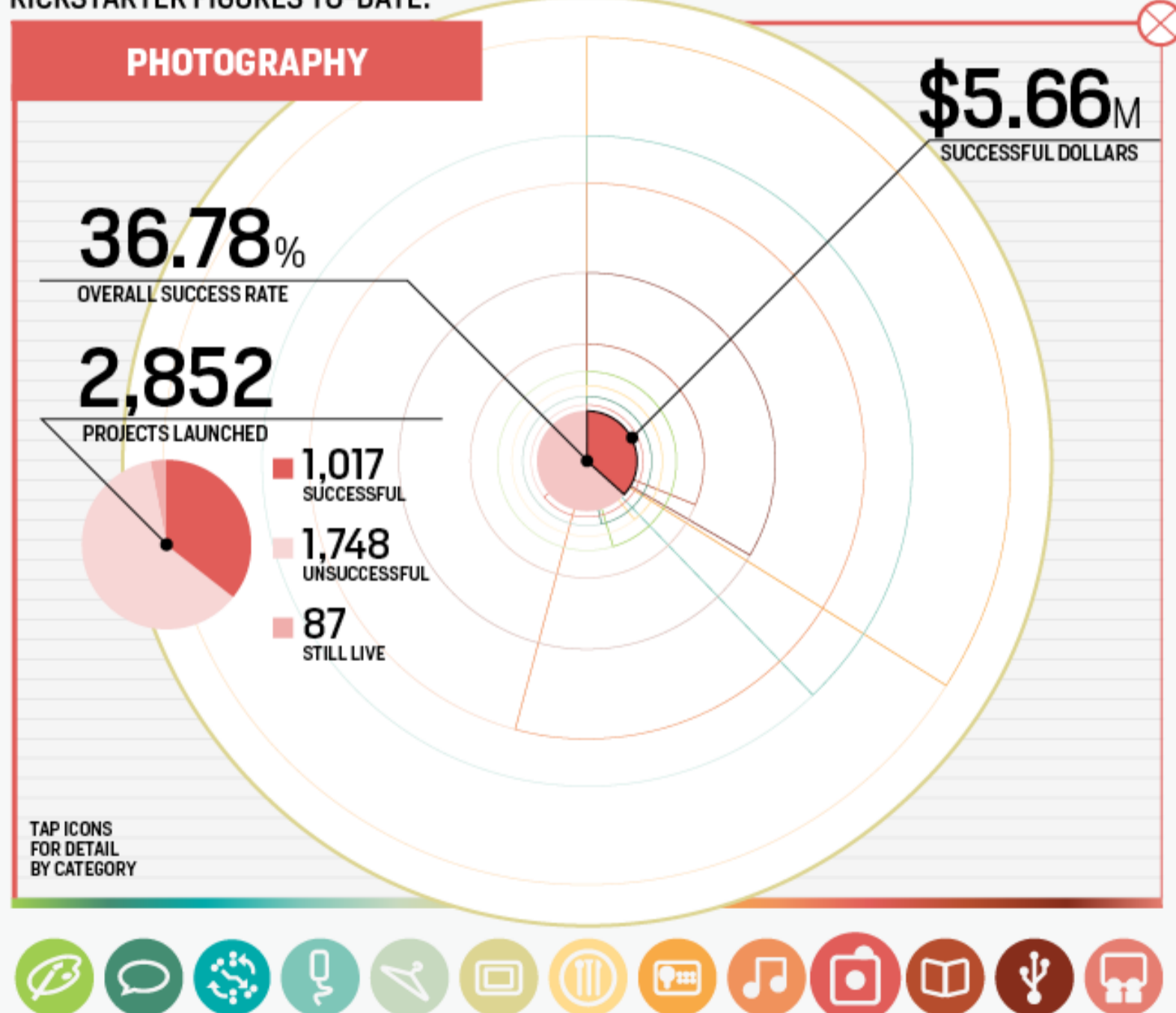


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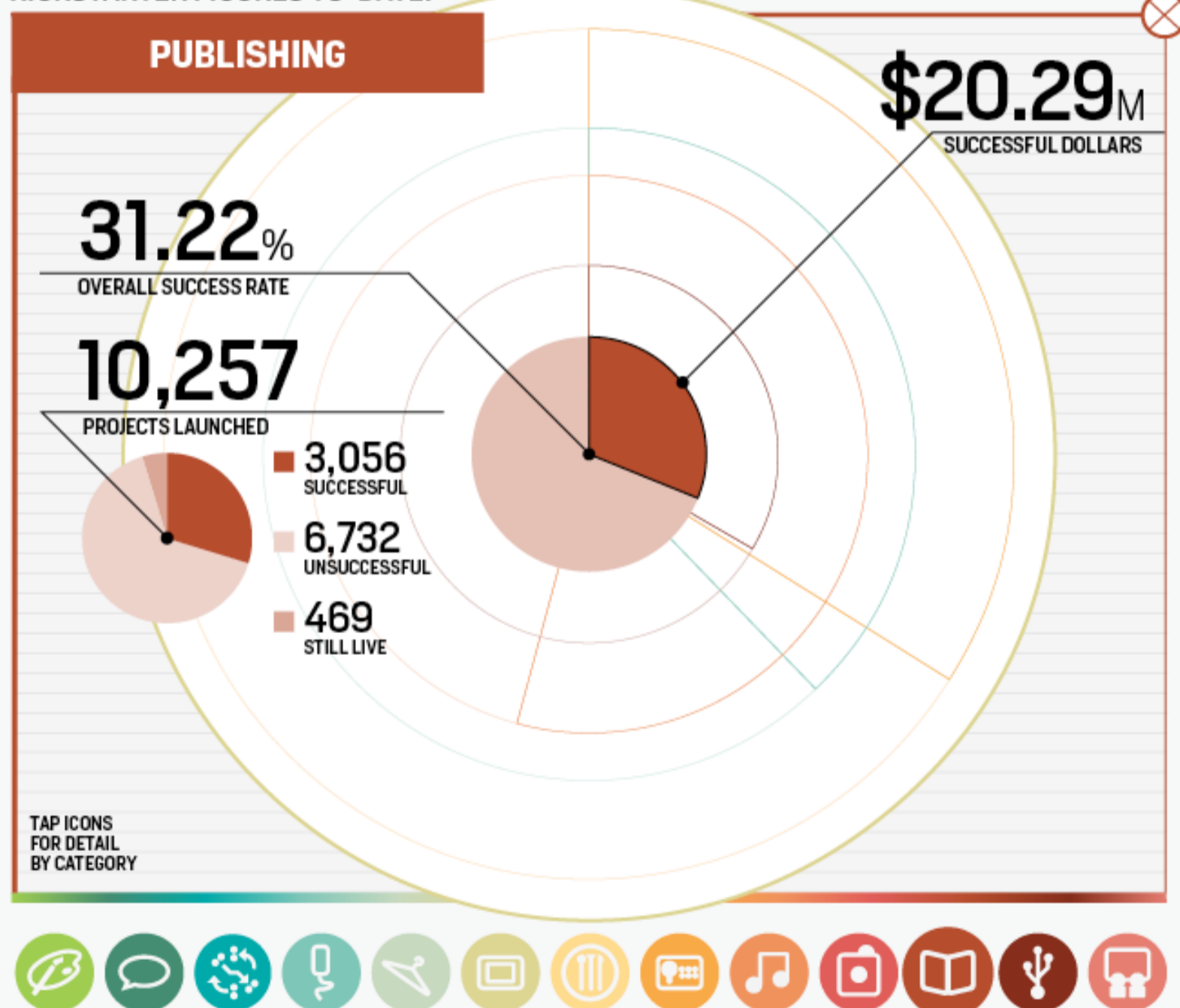


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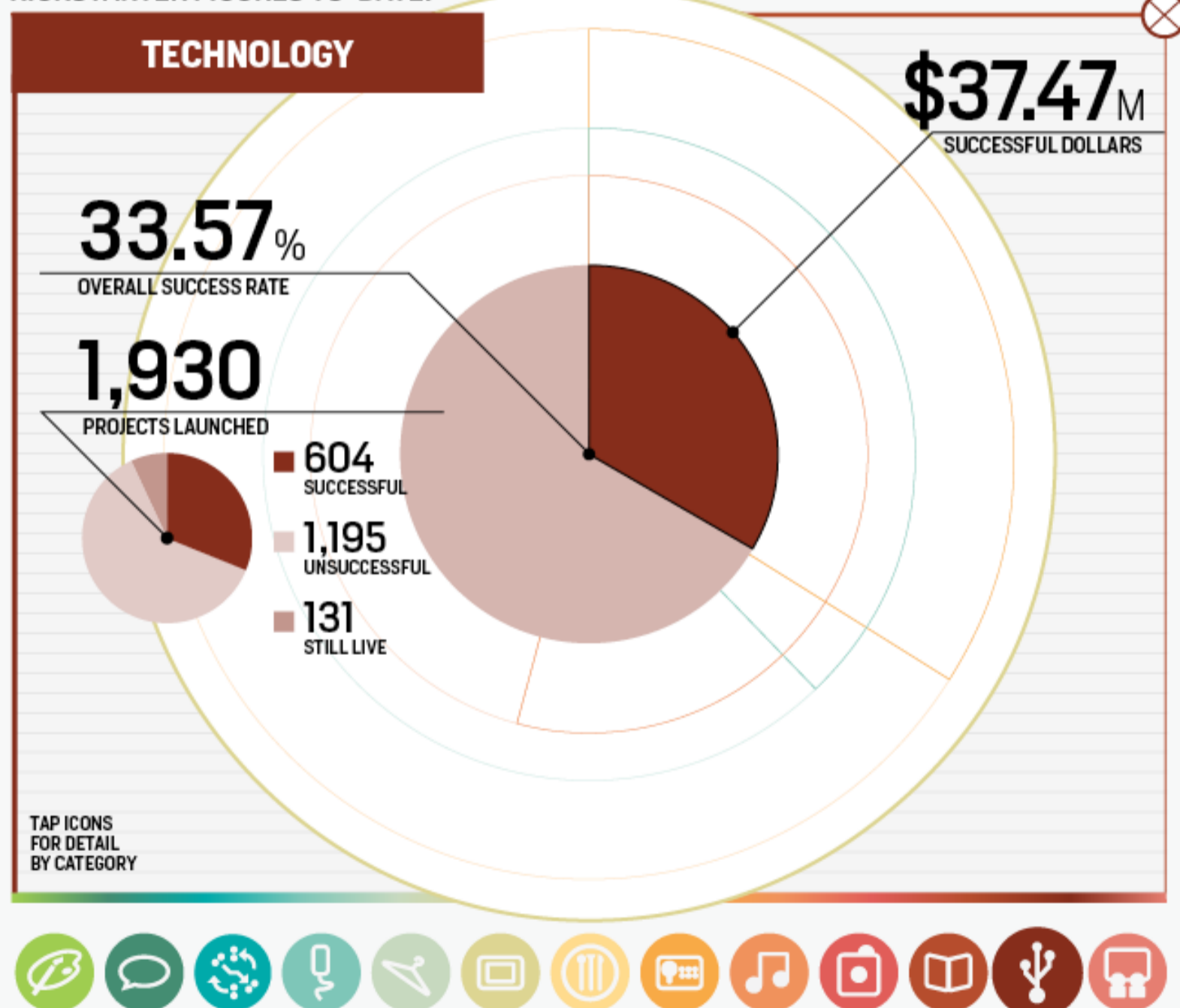


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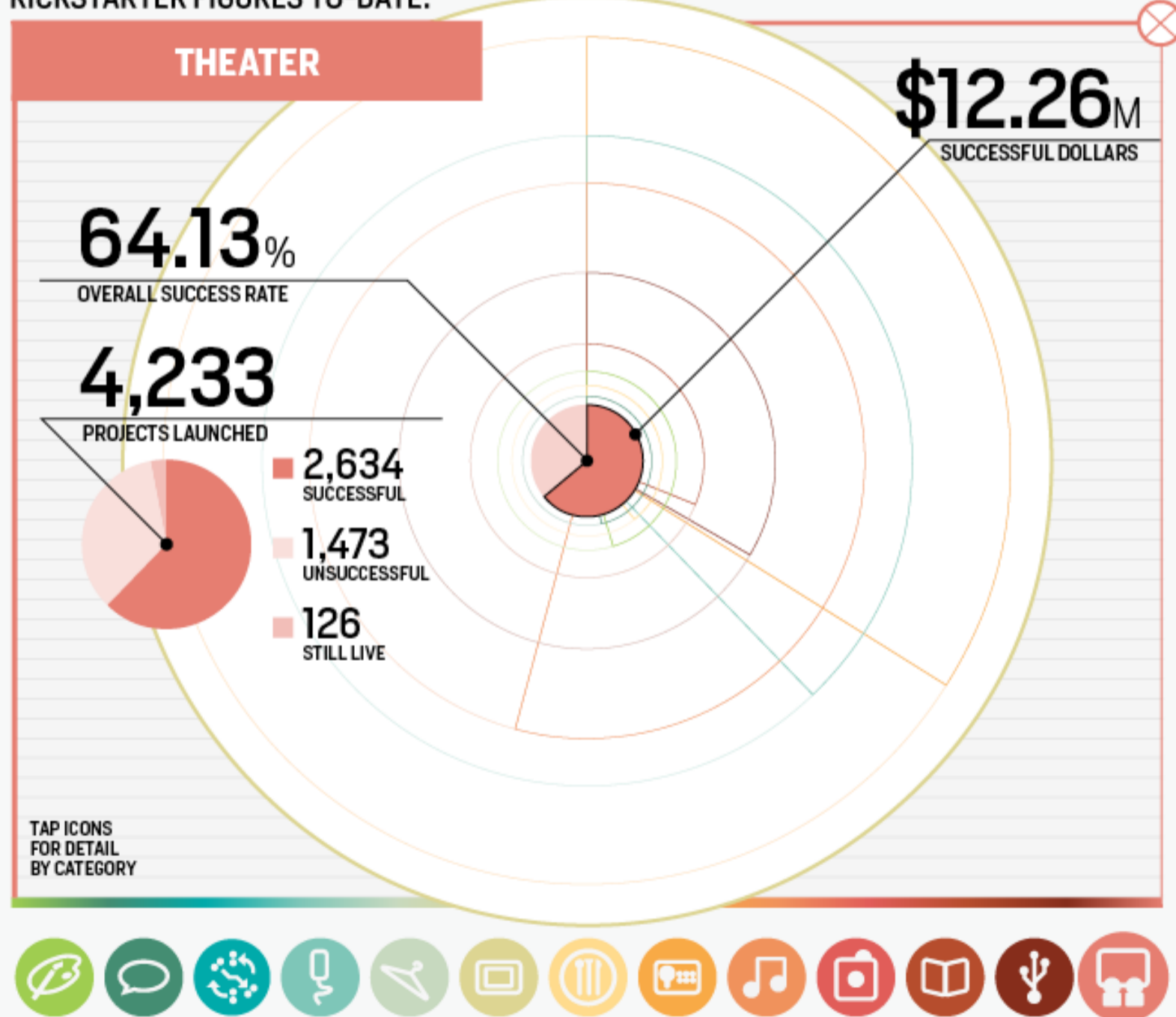


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Inside Google Street View: From Larry Page's Car To The Depths Of The Grand Canyon

By Drew Olanoff
TechCrunch

Glass may be the Google project that has the most people talking these days, but it's far from the company's first big, experimental venture beyond its core services. One of the biggest of those was Street View, which is now very much tak-

en for granted but, naturally, was once an upstart (and somewhat risky) initiative itself. In this piece for *TechCrunch*, Drew Olanoff traces that history back to the beginning, and talks to some of the people behind it about how Street View got to its current state and why Google started it in the first place.


Click on
headlines
to read full
stories

Tower of Light: When Electricity Was New, People Used It to Mimic the Moon

By Megan Garber, *The Atlantic*
Chances are you don't need more than the title to pique your interest here. It refers to a brief period in American history when some cities constructed so-called moon towers as an alternative to networks of street lights, which proved to be both costly and complicated in the early days of electricity.

Upgrade or Die

By George Packer
The New Yorker

What does our constant need to upgrade our devices tell us about ourselves? George Packer suggests in this essay for *The New Yorker* — albeit in the form of an admittedly “unprovable hypothesis” — that it may be directly tied to a broader “chronic stagnation,” and also relate to issues of inequality.

How Disney Bought Lucasfilm — and Its Plans for ‘Star Wars’

By Devin Leonard



Bloomberg Businessweek

There certainly hasn't been any shortage of writing about Disney's acquisition of Lucasfilm last fall, but there hasn't been a whole lot of actual behind-the-scenes details about the deal. *Bloomberg Businessweek* has filled in some of those gaps this month, though, with this in-depth look at exactly how the acquisition happened.



Let's Go Places



  #LetsGoPlaces And celebrate when we get there.

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Let's
Go
Places

CHROME ON THE RANGE

DISTRO
03.15.13

FORUM

SWITCHED
ON

BY ROSS RUBIN

IF CHROME OS DIDN'T START out with an inferiority complex living in the shadow of the massive adoption of its cousin Android, and with Eric Schmidt dismissing the hardware that would run it as cheap and interchangeable, the hardware companies that were early to adopt it didn't help matters. Chrome OS arrived on devices that weren't priced competitively against then-popular netbooks.

Since then, though, the Chrome hardware story has been on a steady upswing. Thanks to Acer, Chromebooks broke the \$200 price point. Thanks to Samsung, they made the leap to the ARM architecture, enabling longer battery life in a thin form factor. And thanks to HP and Lenovo, Chromebooks have joined the portfolios of two of the biggest names in corporate computing. While it may be nowhere near Android's scale in terms of overall devices, Chrome OS is now offered by three of 2012's top Windows PC manu-

facturers. That is certainly enough to show up on Microsoft's radar. Into this fray comes the Chromebook Pixel and it has clearly learned from other successful ecosystems.

FROM ANDROID

Chrome wasn't the first operating system from Google to embrace running on a wide range of devices with an eye toward the low-end market. Indeed, part of the reason Android has been as successful as it has been is its support for a broad range of hardware compo-



“Into this fray comes the Chromebook Pixel and it has clearly learned from other successful ecosystems.”



nents — helpful for pre-paid plans that have little or no subsidy and critical for developing economies. That said, Samsung has risen to the top of the Android market share rankings with high-end devices that pack in a lot of leading-edge technology such as the Galaxy S and Galaxy Note products. These products are required to compete against Apple in the premium segment, something that Microsoft has struggled with in the PC market, and create a general halo effect. Today, of course, Chrome OS can't support the full range of functionality that a Windows PC or Mac can, but the Pixel now offers hardware that can go toe to toe.

FROM APPLE

Many have compared the Pixel's industrial design to that of the MacBook Pro; while both have a chiseled and solid feel, high-resolution displays, square-like power bricks with detachable extension cables and high price points, the Pixel's industrial design is its own. The body has a darker color, sharper corners, a semicircular hinge profile as opposed to the MacBook's drop-hinge design, a contiguous row of shortcut keys above the numbers row that spans the breadth of the keyboard inlay and a Sony-like glowing ring where the AC adapter meets the power port. In addition, as with the




original Cr-48 test developer notebook from Google, there are no external markings like the lit Apple logo that graces all MacBooks; Google has instead added a thin line near the top of the lid with a color-changing LED, a design touch that mirrors the underscores for active pages in Chrome OS' taskbar.

FROM WINDOWS

And then, the Pixel has a feature that Apple has put on no Mac: a touchscreen. Tabling the questions for now as to whether touchscreens are at home on a traditional clamshell or whether their benefit is currently worth the premium on such a device, Microsoft has suffered in the short term from betting big on touchscreen integration that hasn't come together for a few reasons including high device prices and a fractured Windows 8 interface. Pixel certainly suffers from the former, but since it essentially runs one app — the Chrome browser — there hasn't been the need for developers to either create Windows 8-style versions of their apps or to try to make their traditional desktop apps more touch-friendly as Microsoft has with Office. There are still issues with web pages that don't have touch-friendly controls, but these are seeing pressure to become more touch-friendly anyway as the Pixel

benefits from the momentum of the iPad and other tablets.

The Chromebook Pixel, while lightweight for its size, is far from the ultimate in portability, but given the insufficient and inconsistent progress that Chrome OS has made in enabling offline functionality, broadband remains Chrome OS' oxygen. True, the Pixel includes integrated support for LTE. However, like the lower-end HP device that preceded it, the device shines in an environment like an office, home or campus awash in WiFi, the same kinds of settings in which notebooks in general are most often used.

Oddities remain. Since Chrome OS now integrates the app launcher with the Search feature, pressing the Search key now brings up both; this is the OS' equivalent of Windows' classic "pressing Start to shut down" conundrum. However, if you've largely moved to a web-centric lifestyle and you want a premium notebook experience, the Chromebook Pixel is really the only game in town. Given the increasing range of options for web-based streaming services, its high-resolution display extends the appeal of video entertainment to those who value simplicity, security and ease of management over a breadth of functionality. The Pixel is a showcase, and it's a step forward as the percentage of tasks that can be addressed using web-centric computing continues to creep upward. 



WHY ARE WE STILL TEXTING?



DISTRO
03.15.13

FORUM

THIS IS THE
MODEM WORLD

BY JOSHUA FRUHLINGER

“JUST TEXT ME...” ¶ How many times have you told someone that? Say you’re meeting a friend somewhere: What’s the first thing you do when you get there? You text him or her to announce your arrival. Why? Because that’s how you’re trained. You don’t email, call or use some other protocol.

And you know what? You’re paying for that text even though you already have a data plan, unless you’re grandfathered into one of the better unlimited plans of the 20th century. Truth is, SMS texts are perhaps the most lucrative service that providers offer — more so than data or voice plans, and they want us to keep using the outdated technology whether we need to or not.

Texting was excusable 10 years ago, when phones didn’t do email or apps very well. SMS was, after all, the best messaging protocol we had at the time. Based as a way to work with GSM in the lowest-bandwidth footprint possible, it

was quick and to the point in 160 characters and 128 bytes.

Texting was somewhat excusable five years ago, when we were finally figuring out apps and mobile email. At the time, push email was rare — although prevalent on BlackBerry handsets — and text messages were still a good way of sending an important message to the top of someone’s crowded screen.

But today? I’m not sure there is an excuse anymore. We walk around with fast, multi-tasking tablet computers we call phones that are beyond capable of push messages. We’re connected to dozens of social networks at all times,



with our phones sorting priority for us and assuring us that we're on top of incoming information.

And yet we still text like well-trained dogs.

How much is this data really costing us? On our US networks, we're paying about \$20 a month for unlimited texting or \$0.20 per text. Assuming each text message is 128 bytes, you could send 8,388,608 texts in one gigabyte of data. With the currently charged \$0.20 per text, that's \$1,677,721.60 per gigabyte. Of course, you're not paying that, but even at \$20 per month, assuming you send 500 texts in a month, that's \$0.04 per text. Even at that rate, you're paying \$335,544.32 per gigabyte. Screwly numbers for sure, but you can see that the math is way off for the consumer and the provider is happy to provide you with a quick fix.

Texting is convenient and — in many ways — fun. But isn't it time we leave it behind? What do we gain from texting, other than its immediacy, that we can't get from apps or even push email?

There are multitudes of options that use your data plan and still push messages to friends and family like a text. BlackBerry Messenger, iMessenger and Gchat are all slowly taking texting's place, but we still text one another. It's time we make a conscious effort to get off this crazy-expensive train.

If you're still not convinced, give one of the following apps a try and see if you can wean yourself off the texting. Of course, you need the other party to have

the same app in his or her lineup in many cases, but that's an easy leap once you see the prices we're paying per gigabyte.

KIK

Kik is a popular alternative that not only pushes messages but also includes a bevy of metadata that helps contextualize chat conversations like knowing when a message has been delivered and read. It runs on iOS, Android, Windows Phone, Ovi and BlackBerry.


LINE

Line is quickly becoming one of the most popular messaging apps in the world. Launched in Asia, it caters to those who like their emoticons and stickers, but it's a solid messenger and available on iOS, Android, Windows Phone and BlackBerry. It even has desktop versions for when you are in sit-down mode.

GOOGLE VOICE

If you want to send texts to people using SMS but want to use your data connection, Google Voice is a good choice. Just create a Voice number and use it to send texts. This is particularly useful if you want to send texts to people who don't have the same apps as you. It's available for Android, BlackBerry, iOS, Palm webOS, Nokia S60 and Windows Phone.

So there you have it: three options and surely many I have overlooked.

What are you waiting — or paying — for? 



REVIEW

DISTRO
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CONTENTS



TiVo
Mini



HTC
One
(2013)



TiVo MINI



Does the **TiVo Mini** offer enough to make the price of padding out your current DVR arsenal worthwhile?
By Ben Drawbaugh

TiVo fans who want to be able to watch whatever they want, in any room that they want can finally stop waiting. Sure, some have been satisfied with TiVo's Multi-Room Viewing even though it required multiple DVRs and the multiple Now Playing lists and multiple To Do lists that go with them. But for those TiVo fans who want a single whole-home DVR, the TiVo Mini is available to order for \$100 plus a \$6-per-month subscription, or \$249 for the device with lifetime service. This is less than the cost of another TiVo, but more than most set-top boxes avail-



able at retail. Of course the Mini can do what most less-expensive retail boxes cannot; take the place of a DVR and deliver the most popular programming source in America, premium cable TV. Exactly how it well it extends the TiVo experience to another room is what you'll find out if you follow along.

HARDWARE

The TiVo Mini is smaller than the TiVo Stream and its trapezoid shape is unlike any other device from TiVo. How small is it? At 6 x 6 x 1.3 inches, it's small enough to hide behind your TV, and thanks to holes on the bottom, it should be pretty easy to mount on a wall or under a tabletop. On the front is an LED to indicate when the box is powered on and when an IR signal is received (you can set it to only flash when the device receives IR). The connections on the back include the required power, HDMI out and Ethernet port.

There's also a coax cable, but not for what you might think. The Mini doesn't

have an internal tuner, which is also why it doesn't have a CableCARD slot. Instead, it relies on one of the four tuners in a TiVo Premiere for live TV. TiVo owners with only dual-tuner models are out of luck, as the Mini requires at least one four-tuner DVR on the same account. So the coax connection is another way to network your devices together, but using MoCA instead of Ethernet. While not as prevalent as CAT5 in the world of IP communications, MoCA has grown as the medium of choice for whole-home DVRs. This is thanks to the number of homes in America with an existing coax run to every room, its reliable throughput and the fact that it plays nicely with traditional TV services — DirecTV, Dish and many cable companies rely on some form of the technology, for example. Unlike the TiVo Premiere with MoCA, the Mini will not function as a MoCA-to-Ethernet bridge. So if you were hoping to piggyback off its network connection for your game console or smart TV, think again. Even though there are two supported ways to connect to the network, some might be looking for WiFi, but you won't find it here. That's not a surprise, as none of the modern crop of live-TV extenders support it either. We're convinced this is for reliability reasons, especially since TiVo is very clear that the Mini isn't supported at all via WiFi.

For those without a newer HDTV in every room, there are component or

TiVo owners with only dual-tuner models are out of luck, as the Mini requires at least one four-tuner DVR on the same account.





The 3.5mm video jacks need special cables from TiVo.

composite video outputs with analog audio via breakout cables. These aren't off-the-shelf cables, however, as they use 3.5mm jacks to save space on the back of the Mini, but the special cables will be available from TiVo. The TiVo Mini package does include an HDMI cable and a network cable, which is appreciated. The last port out back is a USB port, which so far is only useful to those with TiVo Slide remotes and the



The one hardware feature we are sad to see missing is HDMI-CEC.

required USB Bluetooth adapter.

The one hardware feature we are sad to see missing is HDMI-CEC. Without this control protocol, the dream of having a remote program itself for TV power, input and volume is lost. More importantly, this means there isn't a way for the TiVo app for iPad, iPhone or Android to control the volume or power



of the TV. The last accessory in the box is the TiVo remote. Disappointingly, but not surprisingly at this price point, our favorite TiVo Glo Premium remote is not included; instead, it's the basic TiVo Premiere remote.

SETUP

Setting up a TiVo Mini is a lot like setting up a TiVo DVR: you make all the connections out back and then run a guided setup. We used MoCA to connect the Mini to our XL4, which we suspect will work for most users. If you don't have a network connection where your Mini or your Premiere are located, TiVo will offer a MoCA-to-Ethernet bridge that can go just about anywhere, as long as there are Ethernet and coax drops. Our video connection was pretty basic, with a

single HDMI cable connected directly to a recent HDTV, and there were no handshake issues to speak of.

The rest of our setup took longer than we would've liked, clocking in at almost two hours after the physical connections were made. This process included installing a software update and waiting for both the TiVo Premiere and the TiVo Mini to phone home. We're told the update is unique to our early access, but all Mini owners will have to wait for the devices to connect



Allow Live TV on Other Devices

Do you want to allow devices on your home network to use a tuner on this TiVo box to watch live TV? Only select 2 tuners if you expect 2 networked devices to watch live TV at the SAME TIME.

NOTE: Any tuner that is made available for watching live TV on other devices can NO LONGER BE USED TO RECORD SHOWS on this DVR. If you allow 1 tuner to be used, this DVR will only be able to record 3 shows at a time. If you allow 2 tuners to be used, this DVR will only be able to record 2 shows at a time.

For more info, visit www.tivo.com/help/wholehome

Don't allow live TV on networked devices
✓ Allow 1 tuner to be used by networked devices
Allow 2 tuners to be used by networked devices

1:06pm



to the mothership, as both must be registered to the same TiVo account before they can communicate. The guided setup *does* have far fewer steps than the TiVo Premiere's — thanks to the lack of tuners — but there are the same familiar video and audio output settings. By default the video output is set to automatic, thanks to the wonders of HDMI, and we're happy to report that, like TiVo DVRs, native pass-through is available if you prefer to leave the resolution conversions to your HDTV.

We mentioned earlier that a four-tuner TiVo Premiere is required. In fact, you can't even finish the guided setup without one. You might be wondering if there is a technical reason for this, and our guess would be no. We say that because it's possible to configure your Premiere to not share any of its four tuners with the Mini. Setting it up this way means no live TV on the Mini — we'll discuss a workaround in the next section, as well as other limitations — with the other option being to reserve two tuners to serve up live TV to more than one Mini in your home at the same time. The Mini isn't completely oblivious to a dual-tuner TiVo, however. For instance, if you have a few TiVos on your network, the Mini can access recordings from both two- and four-tuner models.

WHOLE-HOME DVR

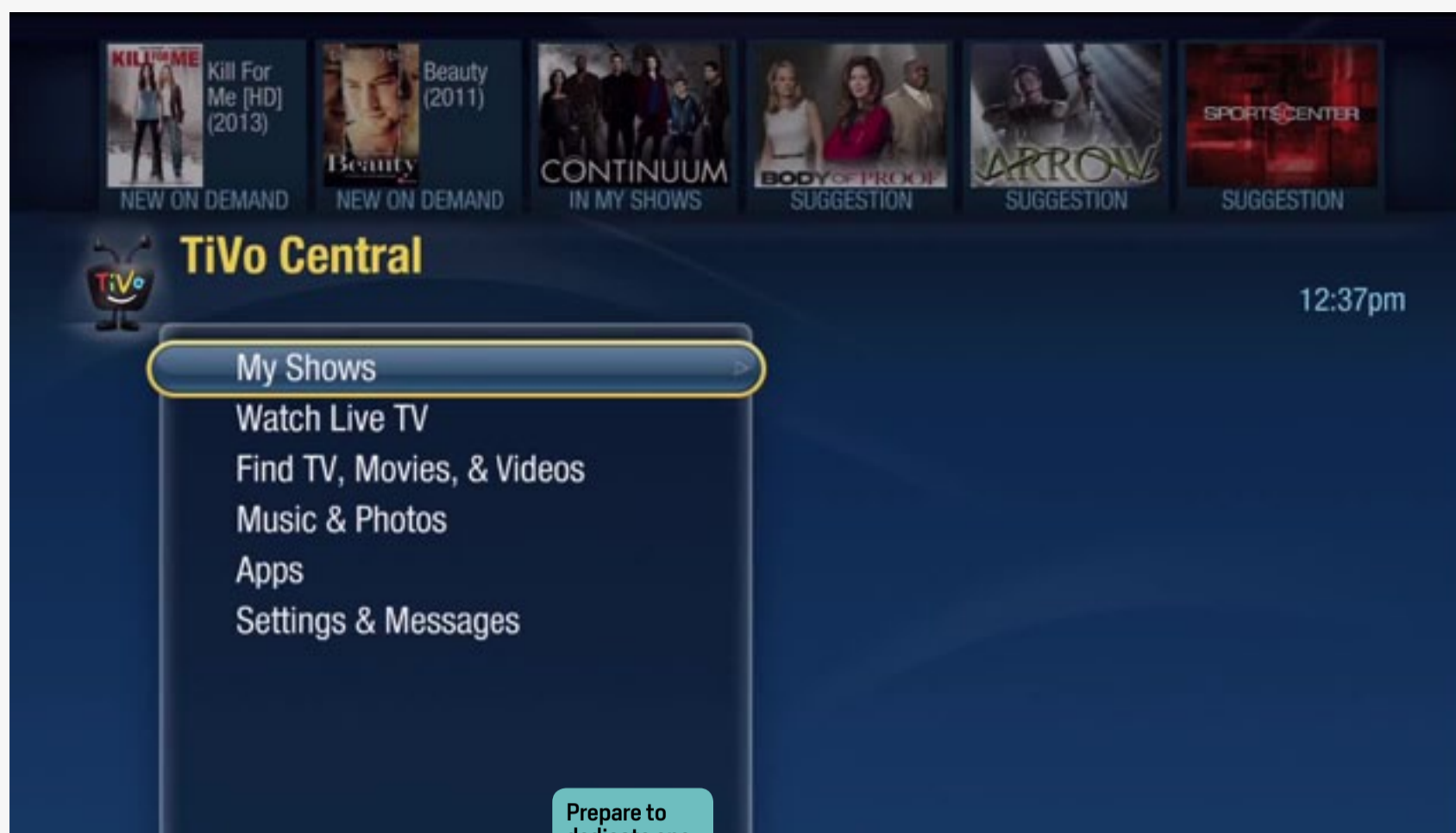
We've long believed that the key to a great whole-home DVR experience is consistency. Viewers shouldn't have to con-

The TiVo Mini experience is actually much snappier than that of the TiVo Premiere.

cern themselves with things like which room they are in when trying to schedule recordings or watch their favorite shows. The bad news: the Mini doesn't deliver a completely seamless experience. The good news: the TiVo Mini experience is actually much snappier than that of the TiVo Premiere, and all the tentpole features are there — or will be.

One key feature that does lag a bit on the Mini is changing the channel while watching live TV. TiVo users watch less live TV than most, but those who like to channel surf will have to live with channel-changing times that are about twice as long as those on the TiVo Premiere (4.5 seconds versus 2.5). Thankfully, though, that's where the lag ends, with trick-play functionality such as pause, skip, fast-forward and rewind working every bit as briskly as on a real TiVo DVR. Speaking of which, the Mini experience for playing back recordings is identical, with the 30-second scan set as default and the well-known 30-second skip backdoor still working. And of course, resuming a recording in a room works exactly as expected: you pause in one room and pick up from the exact same spot in another.



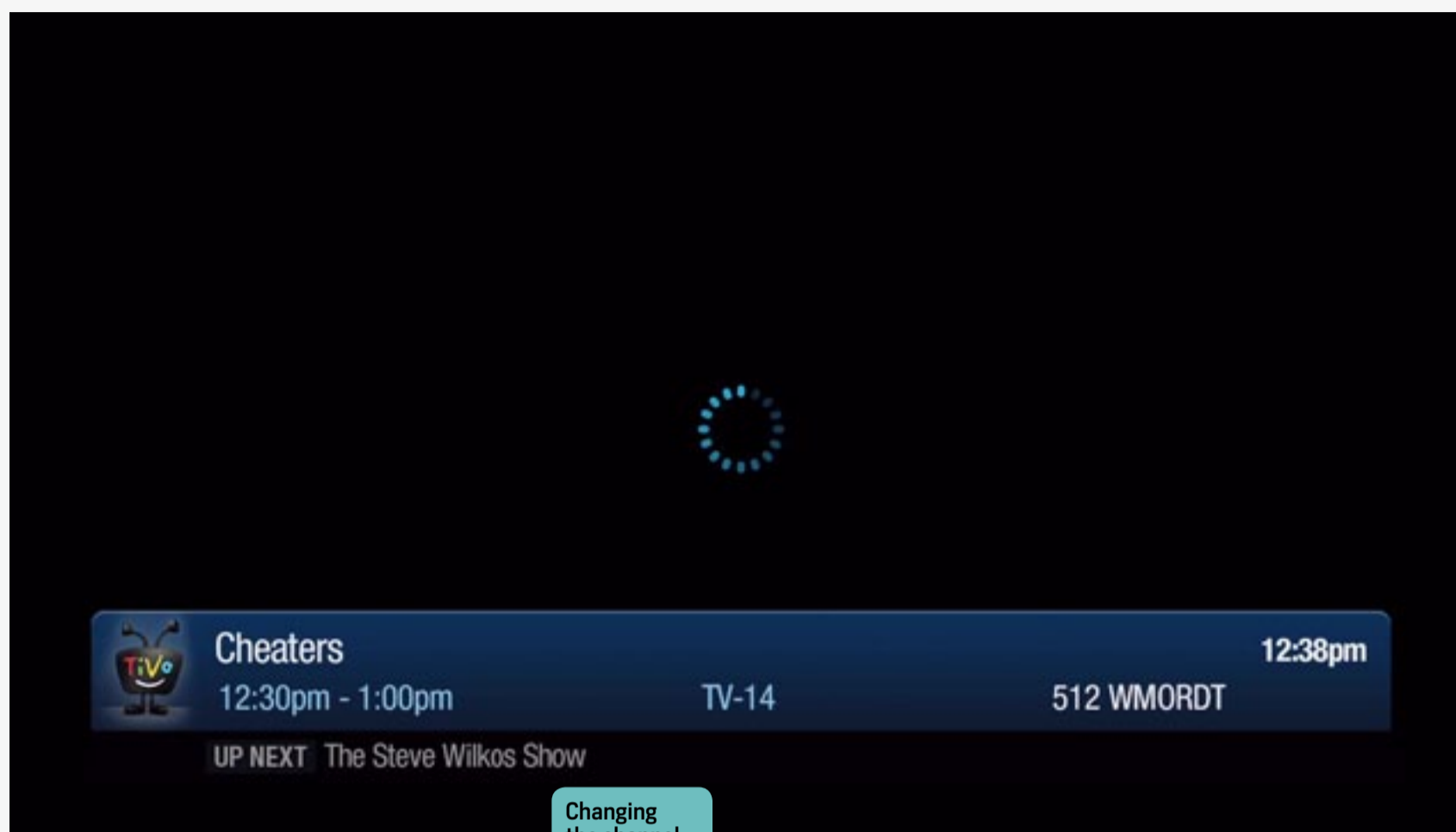


The other noticeable difference when watching live TV is the lack of dual live buffers and the lack of a buffer on shows that are currently being recorded. On a TiVo DVR, if you tune to a show that is currently being recorded, the buffer is available for you to rewind to the beginning of the show. With the Mini, if you want to start from the beginning, you'll have to select the show from My Shows rather than from the guide. This is because the Mini can only use the one assigned tuner from the Premiere. We're told that the ability to dynamically use a tuner for live TV is coming in a future update, but the lack of buffer is the least of our concerns. The big downside to the current functionality is that assigning a tuner for live TV on the Mini

means there is one less tuner available for recording. This is true even when you aren't using the Mini. If you don't watch much live TV, there is an acceptable workaround. We disabled sharing a tuner for live TV via the Premiere's settings and found that we could start a recording from the guide on the Mini, then watch it live by selecting it from My Shows on the Mini. This is essentially how live TV on the TiVo Stream works, with the main difference being that the recording is started automatically for you when you select a show from the guide on the mobile app.

One missing feature that prevents the Mini from delivering a consistent TiVo experience is the lack of a Manage Recordings and Downloads menu. One of only six of the main menu op-





tions on the Premiere, this particular item is the key to what we call DVR maintenance. This means it isn't possible to review the To Do List, manage your Season Passes or to even determine why a show didn't record from the Mini. The good news is that all of these functions are easier to control on the TiVo mobile apps, and the core ability to schedule recordings and set up new Season Passes can be done via the Mini. We still think this is a miss, as we see no reason why we should have to walk to another room to cancel a Season Pass.

TiVo has always positioned the TiVo Premiere as a device that “blurs the line between broadcast and broadband,” and our hope for the Mini was that it would do the same. But you can't do that, or

deliver a consistent TiVo experience, without Netflix. TiVo assures us that it is working to get Netflix, as well as Amazon, added to the Mini, but they will be glaring omissions if the Mini launches without them. Many of the other top content apps are there, though, including Hulu, Pandora and YouTube.

WRAP-UP

Like other recent TiVo product releases, the Mini will require the promised updates — including dynamic tuner allocation for live TV, and support for Amazon and Netflix — before expectations can be met. TiVo has consistently delivered in the past but never as quickly as fans might wish, and, for better or worse, we expect that the Mini will be no different. Out of the box, the core functionality





Updates
are needed
to solidify
the Mini
experience.

works well enough now to satisfy most while they wait. Exactly how the whole-home functionality will look after a few updates will be something to watch out for, but as it

stands now, the Mini falls short of the competition in regards to consistency. The Ce-ton Echo, Dish Joey and DirecTV RVU client all provide a more seamless whole-home DVR experience than the Mini. But none of them work with your TiVo, and for those who believe that there is no substitute, you can finally enjoy a genuine whole-home DVR experience while spending less than

the price of another DVR. **D**

Ben Drawbaugh is Associate HD Editor at Engadget, an HD snob, father, car guy and mountain biker.

BOTTOMLINE

TiVo MINI

\$100
PLUS \$6 / MO.



PROS

- An affordable way to get TiVo on a second screen
- Faster UI than on a TiVo Premiere
- MoCA built-in for a reliable and accessible network connection

CONS

- Requires a four-tuner TiVo to set up
- Assigning a tuner for live TV means one less for recording
- No Netflix, Amazon or the ability to manage recordings

BOTTOMLINE

The TiVo Mini is a great way to affordably extend the TiVo experience, but we'll have to wait for some updates to complete the experience.



HTC ONE (2013)



Can HTC capture the world's attention with its newest number **One** smartphone?
By Brad Molen

One. In literal terms, it's a number. To HTC, however, it's a branding strategy — the foundation upon which the entire company is now based. Just take one look at the One lineup and you'll easily understand this is the manufacturer's pride and joy. There's a very good reason for that: in a crowded smartphone market, HTC is the underdog to titans like Samsung and Apple. The company needs to stand out if it even wants the *chance* to prove itself to consumers.

Last year's One X marked a solid start, and while it didn't pick up the momentum CEO Peter



Chou would've liked, the follow-up model — simply called the One — takes HTC's design and imaging chops to the next level, bringing a new UltraPixel camera sensor, among other top-shelf specs. But will it catch the eye of potential smartphone buyers, in light of another key product announcement? We'd say it's got more than a fighting chance.

HARDWARE

In order to most fully appreciate the One's hardware, you first need to understand the process that goes on behind the scenes. Rather than opt for the sort of polycarbonate shell used on the One X and One X+, HTC crafted the One out of a single block of anodized aluminum, sprinkled with polycarbonate accents throughout. It's incredibly intricate: each unit goes through at least 200 minutes of CNC machine cuts, and the aluminum is etched into channels filled with polycarbonate — a technique called zero-gap injection molding. Add chamfered, polished edges that connect the sides of the phone to the glass (Gorilla Glass 2, to be specific), and you have a handset with one of the best industrial designs we've ever seen. The amount of detail here is staggering, and it reflects just how crucial this

device is to HTC's future.

Much like the Windows Phone 8X and Droid DNA (globally known as the Butterfly), the One has a pyramid-like internal setup: larger components like the display and battery sit up front, with the parts getting progressively smaller as you move toward the back of the phone. This gives the rear cover a sleek curve that makes it utterly comfortable to hold. Though the One is even slimmer, at 9.3mm (0.37 inch), than the 10mm (0.4-inch) 8X, it's easier to grasp because the edges are contoured the way they are. At 5.04 ounces (143g), it feels a little weightier, but

The shell is a single block of aluminum with lots of CNC love.



We're smitten with the One's gorgeous industrial design and premium build.

less than you might have guessed; it's actually relatively light given the materials used.

Ultimately, we're smitten with the One's design for all sorts of reasons: it's sexy, it feels secure in the hand and the combination of unibody aluminum and polycarbonate ensures the phone won't shatter into a million pieces if it were to hit the ground (although it may get dinged or scratched up a bit, depending on the angle).

While industrial design, ergonomics and build quality are a good start, there's much more to this skinny slab of aluminum. The front of the device is home to some of the biggest changes, headlined by a 4.7-inch S-LCD3 panel with 1080p resolution and two capacitive soft keys just below it — a departure from the standard three-button setup. A tiny HTC logo sits where the home button once did, smack-dab in between the two soft keys. In fact, it's almost a little deceiving: it looks as if the logo should double as a button (we'd prefer it), but unfortunately there's nothing more than meets the eye. Aluminum strips line the top and

bottom of the phone's face, with a set of BoomSound

The back of the One is minimal and refined in its design.



speaker grilles designed to offer stereo sound when you're watching movies or listening to music. (The grille setup isn't unlike what you'd find flanking the keyboards of some laptops.) An LED notification light resides under the top grille, toward the left. A 2.1-megapixel wide-angle, front-facing camera is located in the top-right corner, while a pair of sensors sits over on the top left.

The front is by far the busiest part of the phone, while the edges and back have a more minimal design that helps keep the phone looking refined. The polycarbonate-laced sides angle inward until they meet the Gorilla Glass on the front, with only a chamfer to connect them. The left side is uninterrupted, save for a micro-SIM tray and miniscule ejection port. A micro-USB / MHL port and mic are on the bottom, and the right is taken up by a single volume rocker that uses the same ridge-like exterior as the Droid DNA.

The top end is where things get a little more interesting. The 3.5mm headphone jack is nothing new, but the power button has a dual personality: it doubles as an infrared (IR) blaster capable of transmitting and receiving, allowing you to use the handset as a TV



At the top, the One's power button doubles as an IR blaster.

remote. Because that power button is housed on the left, the act of locking and unlocking the One could be a bit more awkward for folks who tend to hold their phones in their left hands.

Now we turn to the back, which itself is a study in symmetry and simplicity. Two strips of polycarbonate line the top and bottom, lining up neatly with the top and bottom of the 4.7-inch display on the other side. Squint hard enough and you may see a noise-cancelling mic in the top strip. The camera lens sits in the middle of the back, just barely below the top strip; it's encircled by a thin layer of polycarbonate and is slightly recessed to prevent the glass from getting scratched. You'll see an LED flash to the left of the camera; there's also the obligatory HTC logo set in the absolute center of the device, and Beats Audio branding has a spot just a smidgen above the bottom strip. An NFC transmitter is built into the back



HTC ONE	
DIMENSIONS	137.4 X 68.2 X 9.3MM (5.41 X 2.69 X 0.37 INCH)
WEIGHT	5.04 OZ. (143G)
SCREEN SIZE	4.7 INCHES
SCREEN RESOLUTION	1,920 X 1,080 (468 PPI)
SCREEN TYPE	S-LCD3
BATTERY	2,300MAH LI-POLYMER (NON-REMOVABLE)
INTERNAL STORAGE	32/64GB
EXTERNAL STORAGE	NONE
REAR CAMERA	4MP, BSI, F/2, 1/3" SENSOR SIZE, 2MP, OIS
FRONT-FACING CAM	2.1MP
VIDEO CAPTURE	1080P, 30 FPS (FRONT AND BACK)
NFC	YES
RADIOS	DEPENDS ON MARKET — SEE HARDWARE SECTION
BLUETOOTH	V4.0 WITH APTX
SOC	QUALCOMM SNAPDRAGON 600 (APQ8064T)
CPU	1.7GHZ QUAD-CORE
GPU	ADRENO 320
RAM	2GB
ENTERTAINMENT	MHL, DLNA, IR SENSOR
WIFI	DUAL-BAND, 802.11A/AC/B/G/N, WIFI DIRECT
OPERATING SYSTEM	ANDROID 4.1.2 (UPGRADEABLE TO 4.2), SENSE 5 UI

around the camera module. Unfortunately, though, one thing you won't find back here is wireless charging. Sorry, folks.

Finally, as you've likely already surmised by now, the 2,300mAh battery inside the One isn't removable or even accessible. This should come as no surprise to anyone who has used an HTC unibody flagship. There's also no place to stick a microSD card, so the 32 or 64GB of internal storage will have to suffice.

There's plenty more going on underneath the shell: the One is powered by a 1.7GHz quad-core Qualcomm Snapdragon 600 (APQ8064T), an Adreno 320 and 2GB DDR2 RAM. While there are two basic versions of the device — the UL and LTE-less U — there will be six different SKUs that feature six different sets of LTE and HSPA+ bands. All of the units are quad-band GSM/EDGE (850/900/1800/1900MHz), but it gets more complicated as the speed goes up: our review unit, which was made for European frequencies, sports 900/1900/2100MHz UMTS/HSPA+ (3G) and 800/1800/2600MHz LTE. The "U" offers the same three frequencies and adds 850MHz for good measure, while Asia's variant uses 850/900/1900/2100MHz



3G and 1800/2600MHz LTE. Confused yet? Let's throw the US models into the mix. AT&T will offer 850/1900/2100MHz 3G and 700/850/AWS/1900MHz LTE. T-Mobile's has 850/AWS/1900/2100MHz 3G and 700/AWS LTE. Finally, Sprint's version uses 700/AWS 3G, 800/1900MHz CDMA and 1900MHz LTE.

DISPLAY

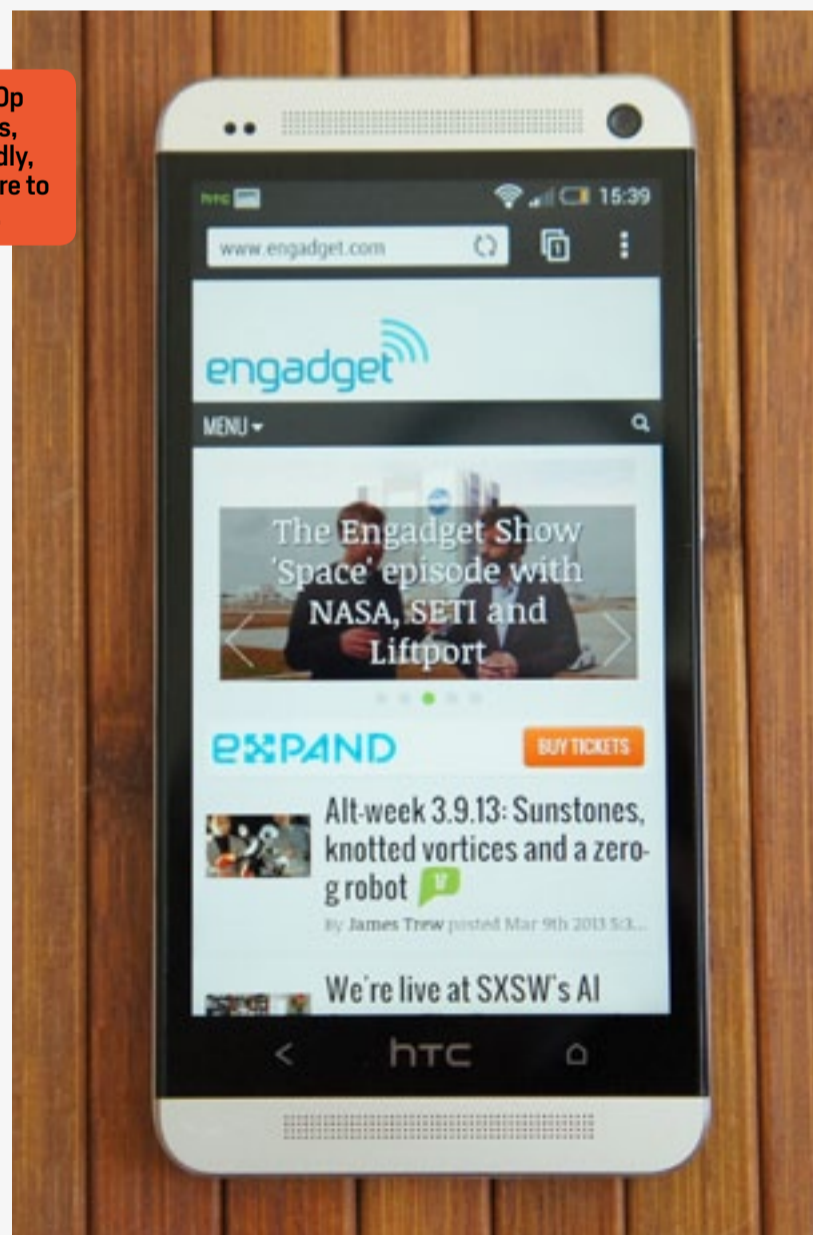
We praised the One X's 720p S-LCD2 display when it first showed up on the scene last spring, and there was even more to love a few months later when the Droid DNA came out with a 1080p S-LCD3 panel. Having built up this much momentum, we weren't expecting anything less than the absolute best from the One. And on paper, certainly, it doesn't disappoint: the One features the same number of pixels as the DNA, except they're crammed into a 4.7-inch screen (4.65 inches, to get technical). For the pixel-density fanatics out there, this means the One offers an incredible 468 ppi. The setup sounds great on paper, but how does it translate into real life?

To be honest, the display is the area in which we feel the most nitpicky, because the 1080p panels we've seen on other flagships so far feature simply jaw-dropping quality. And to pick up on minute differences between these incredible displays, you'd have to really start splitting hairs. In particular, 1080p displays don't offer nearly as

The One's display is the most stunning we've seen thus far, but it's only slightly better than the Droid DNA's.

noticeable a difference over 720p as we saw with 720p over qHD. Given how far we've come in terms of resolution and pixel density, the only way for screens to stand out above the crowd is to offer the best color, viewing angles, bright-

The 1080p display is, expectedly, a pleasure to observe.

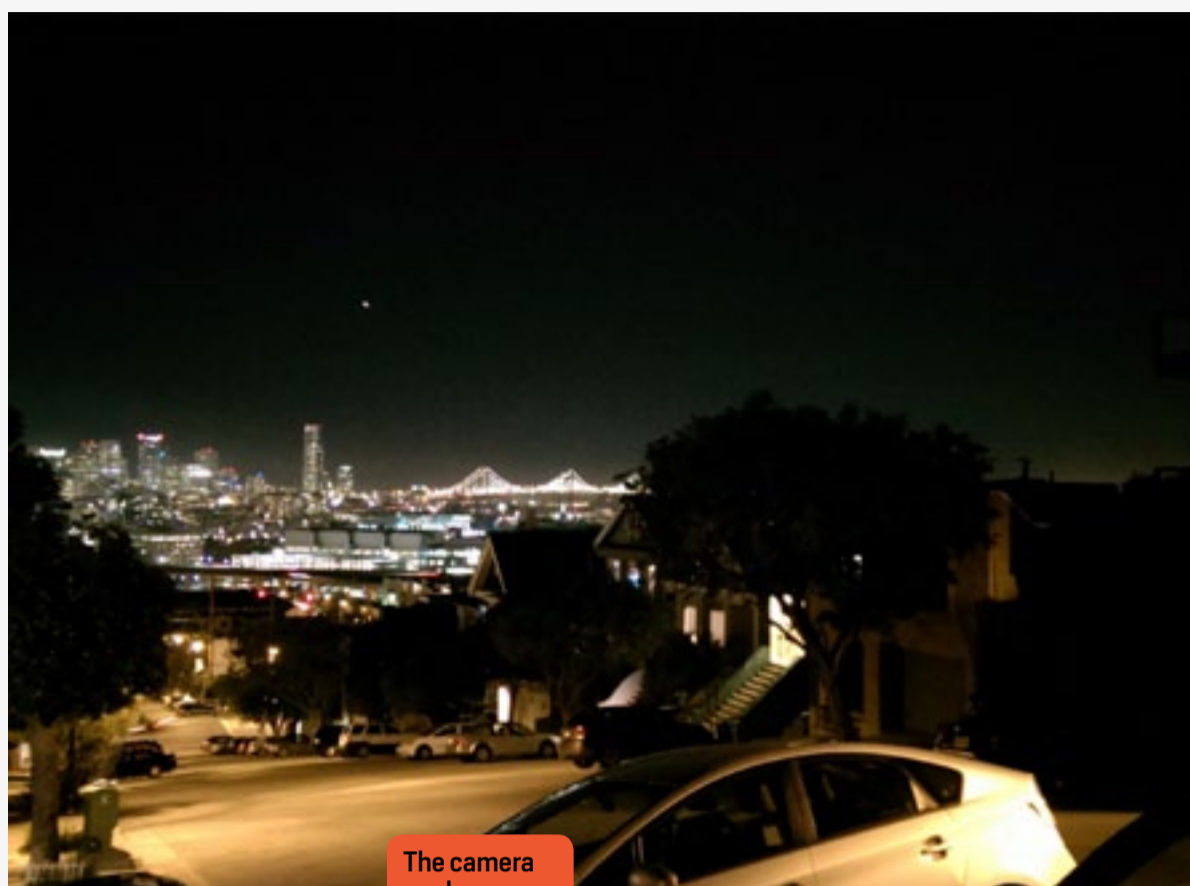


ness and readability in daylight.

The One's display does very well in all four areas. It's slightly brighter than the DNA's and significantly better than the One X+'s S-LCD2; the darks are sufficient, though still not as rich as what you'd find on an AMOLED; the other colors are incredibly close to fully natural; viewing angles are just as good as the One X+ and DNA, because it's difficult to get any better; and we could see the display without a problem in direct sunlight. Movies look amazing on the One, and if we want to get exceedingly picky, the text on the One is slightly more crisp than on the DNA — but this is something that's only noticeable when you view the two side by side. Tiny details aside, the One's display is the most gorgeous we've seen thus far.

CAMERA

In the days leading up to the One announcement, HTC promised a whole new imaging and sound experience on its new flagship — and it certainly wasn't exaggerating. With the exception of Nokia with its PureView line, all of the company's competitors are busy increasing the megapixel count on their



The camera works amazingly well in low light.

latest and greatest cameras. HTC, however, boldly chose to go the opposite direction: it *decreased* the resolution to four megapixels. As you would expect, there's a lot more to the story than a simple drop in pixel count — in fact, HTC coined the term UltraPixels to describe its new imaging innovation.

The idea behind the UltraPixels is to take a physically large sensor and combine it with big pixels that are capable of gathering more light than standard-sized ones. Whereas the typical smartphone camera features 1.1µm pixels, the One proudly boasts a one-third-inch BSI sensor with 2µm pixels capable of absorbing 330 percent more photons. But that alone isn't enough to excel at low-light photography, so HTC also uses a 28mm f/2 AF lens and optical image stabilization (OIS) — and just



in case you still can't capture enough light, an LED flash is thrown in for good measure.

HTC's also developed a next-gen image signal processor (ISP), aptly named ImageChip 2. Despite a lower megapixel count, the new chip is capable of continuous autofocus in less than 200ms, reduced noise, real-time lens compensation and 1080p HDR video recording. It also offers a buffered-capture cycle with pre- and post-shutter recording, not unlike what you get with BlackBerry's Time Shift, Scalado's Rewind, Samsung's Best Face and Nokia's Smart Shoot. In

other words, don't worry about the resolution on the camera — instead, let the images do the talking.

The front-facing camera hasn't been neglected either. The 2.1-megapixel module comes with an f/2 wide-angle (88-degree) lens and is capable of capturing up to 1080p video, much like its compadre on the back of the One. Even though it can't do the same fancy scene modes (for video or stills) as the rear camera, you can at least grab HDR shots and tweak white balance if necessary.

In a nutshell, all of the usual customizable settings are there: white balance, ISO up to 1600, exposure control, HDR,

The 4MP camera sensor breaks from convention.



face detection, a specific macro mode, panorama, three crop styles, plenty of filters and a post-shot photo editor. There's a clever UI trick that lets you switch between rear and front cameras by dragging your finger down from either side of the phone. The only thing that's sorely missing is the ability to touch and hold the on-screen shutter button to lock exposure and focus, even when the One's burst-shooting mode is disabled.

When it comes to performance, there are so many places we could start, so we'll begin by discussing the megapixel myth. It's so easy to just naturally assume that a camera with lower resolution is worse than one capable of capturing a larger number of pixels, but that isn't always the case. Indeed, cameras with higher resolutions allow for better cropping and digital zooming. When shots are viewed at their regular size, however, there isn't any visible degradation of detail. Colors are impressively natural, and white balance is excellent as well. The only issue we found with stills was that the camera tended to overexpose subjects in direct sunlight.

The One camera truly outshines almost everything else in low-light situations. It usually produces better shots at night than the Nokia Lumia 920, and comes in second only to the current imaging king, the Nokia 808 PureView. We were amazed by how much errant light it picked up; the One could snag perfectly usable shots on pitch-black streets, and the OIS worked like a

We were blown away by how much light the One camera was able to grab at night.

charm. The only time noise actually became a problem was in extremely dark scenarios, but otherwise we were quite impressed by how clear most of the images came out.

In short, even though it's not perfect and we'd love to be able to get more detail from zoomed-in shots, the One's UltraPixels methodology appears to be completely sound. We're confident enough in its quality, in fact, to declare the One as our new go-to camera.

On the video side, there's plenty to keep you occupied as well. Since the ImageChip 2 is capable of recording 1080p video at about 30 fps and 720p at 60 fps (this includes HDR functionality as well), you can take these options out for a spin at any time, in addition to HTC's signature slow-motion mode. In our time with the One, daytime videos were not only crisp and smooth visually, but the One's noise-cancellation mics did a great job filtering out wind and other unwanted background noise, while picking up our own voices very well at the same time. HDR videos are pretty good, but we noticed the occasional weird artifact on some frames, while brightness mysteriously jumps at times. Videos taken at night



were quite clean, though the frame rate appears to suffer, dropping down from 30 fps to around 20, and there are fairly minor issues with white balance as well.

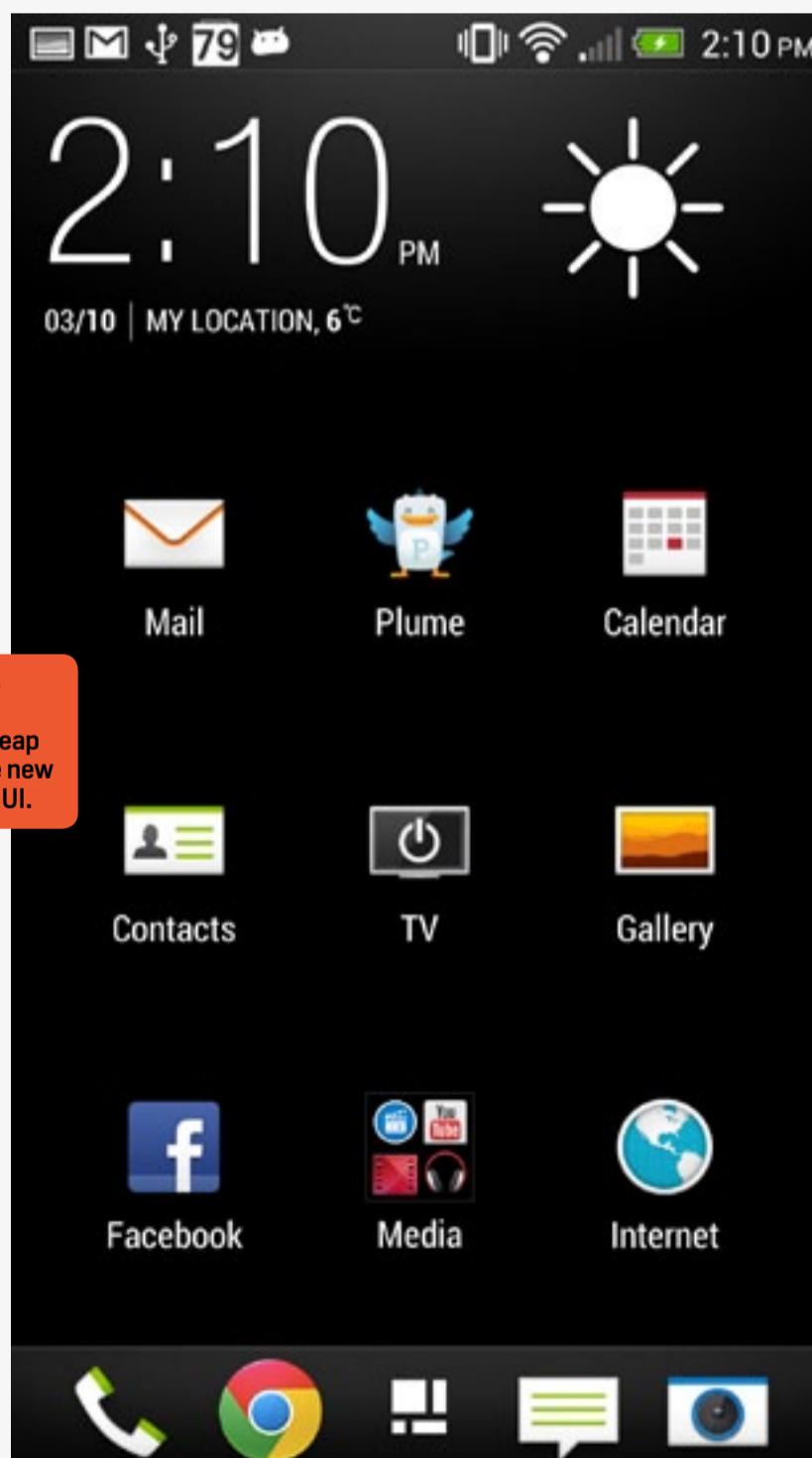
As if the UltraPixel camera isn't enough indication that imaging plays a huge part in HTC's strategy to gain market share, it's also introduced a unique feature called Zoe. When looking at one, it's hard not to envision an old-fashioned zoetrope spinning around and around to create a short movie. The feature is capable of capturing four to five full-res stills per second while recording a few seconds of 1080p video. In the end, what you get is a short video segment and a burst of roughly 20 images — think of the moving pictures in *Harry Potter*, and you'll get the idea. On the surface, it doesn't seem like this would be of any practical use, but we started to appreciate it as soon as we saw animated images pop up in our photo gallery. Once we saw the highlight reels and Zoe Share, however, we were completely sold. We'll discuss these features in the next section.

SENSE 5

At its core, the One is an Android 4.1.2 (Jelly Bean) device. HTC, however, would much rather have the focus be on the custom skin job it's put on top of Google's mobile OS. Known as Sense 5, the next generation of the user interface is very much an evolution from previous iterations — we'd dare say that it's a com-

pletely different experience, much like Sense 4 was from version 3. The fourth iteration was a noticeable improvement, as HTC had finally merged many of its ideas with Google's general design guidelines. Now, with Sense 5, the UI has changed on nearly everything once again, from the home page to core HTC apps; it's better than Sense 4 in some ways, but in other ways it's a step back.

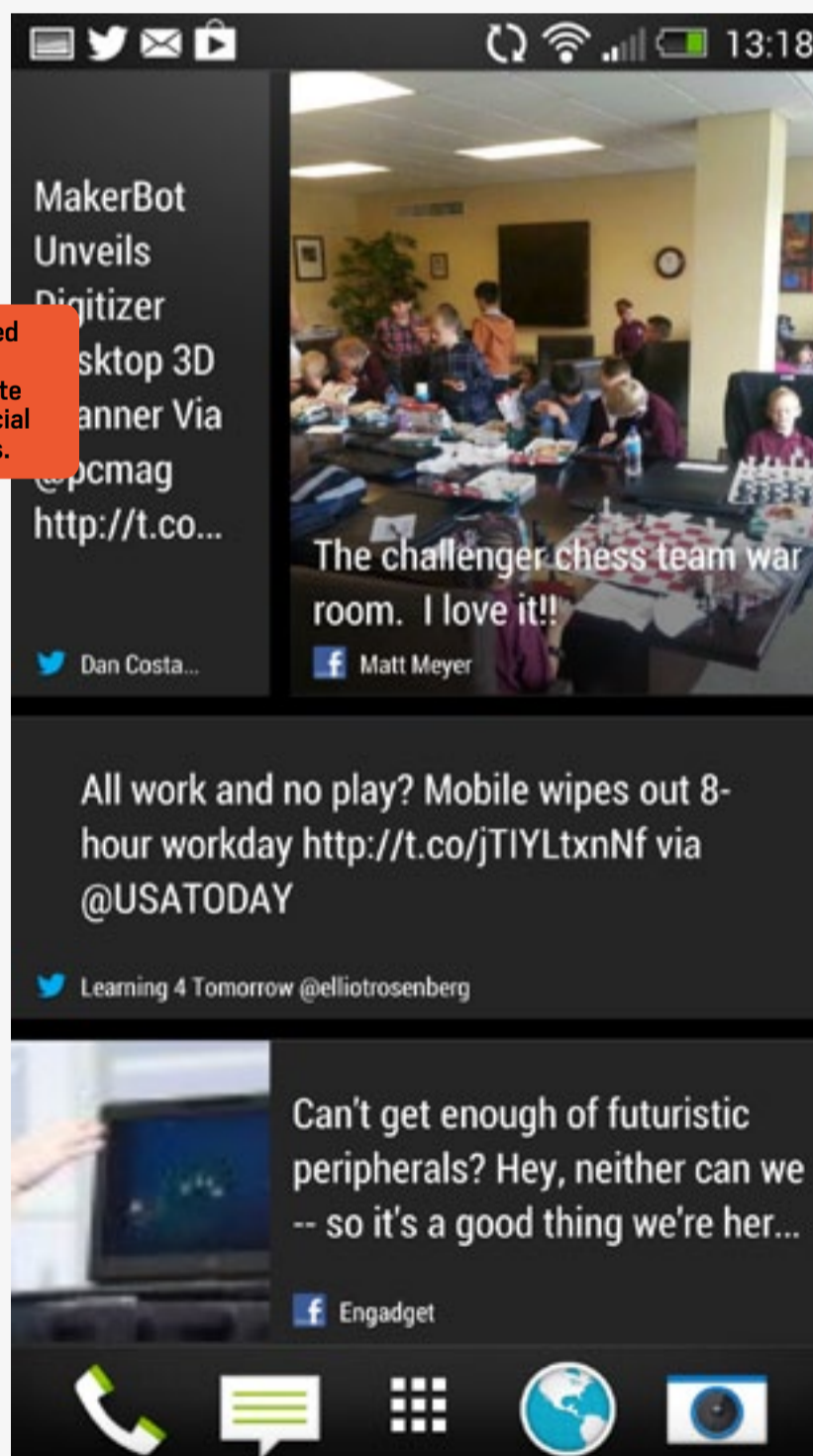
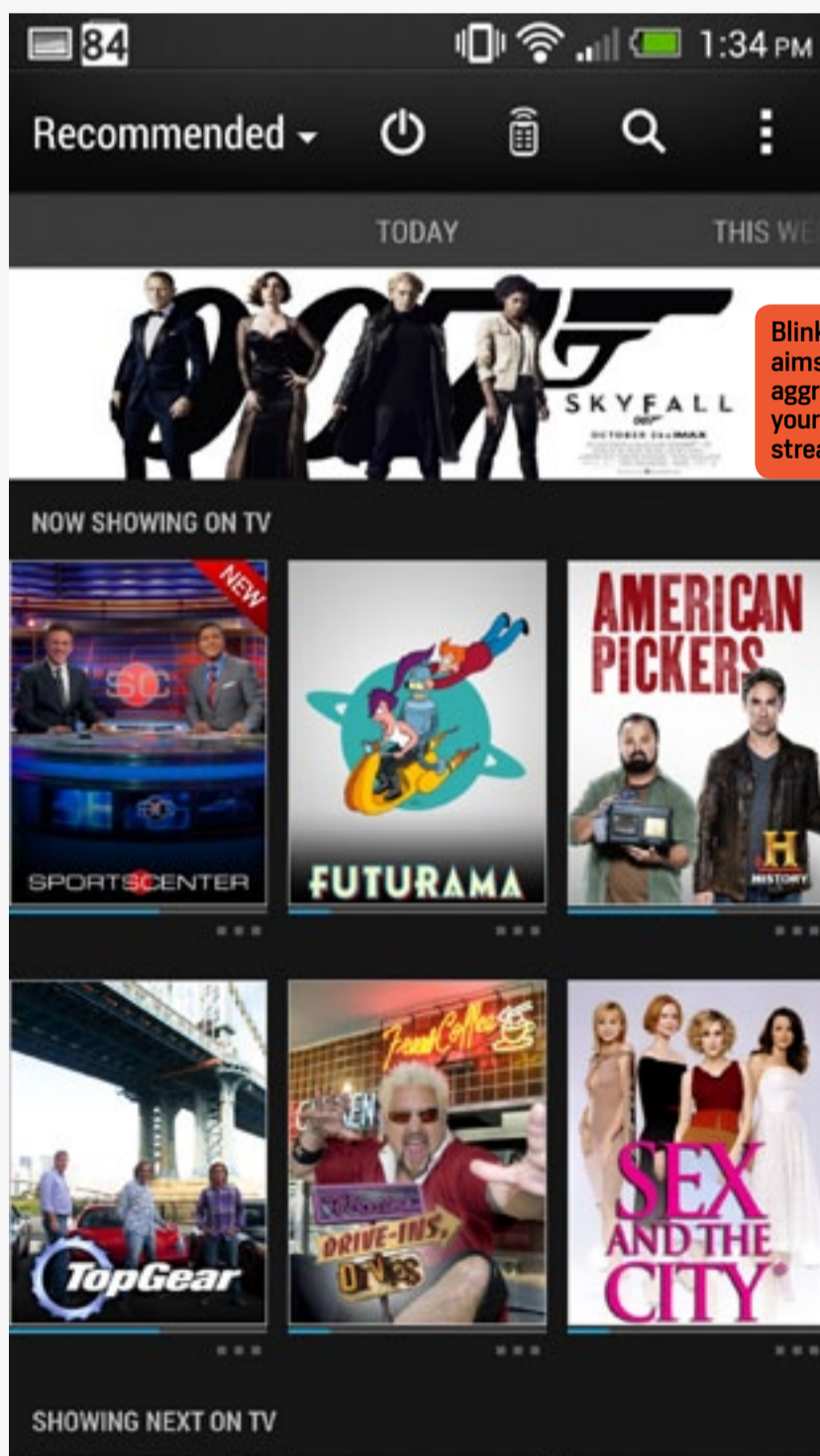
For basic navigation, Sense 5 devices use two soft keys. This is a huge



departure from Sense 4 devices, which use a three-button setup consisting of back, home and recent apps (with the latter being customizable to work as the menu button if desired). The One, on the other hand, offers only back and home keys. A long-press on home activates Google Now, while double-tapping the same button brings up a new recent apps menu that is much improved over the card-style version on Sense 4 that reminded us too much of Windows

Phone and webOS. Cards are still present this time around, but they're much smaller and you can view up to nine in total. It's still possible to flick each one up to remove them, but since we often like to have more than nine apps open at the same time, this limit is too restrictive for our tastes.

Because Sense 5 eschews a menu key, it means many third-party apps have to throw in the virtual menu key at the bottom of the screen. This feels

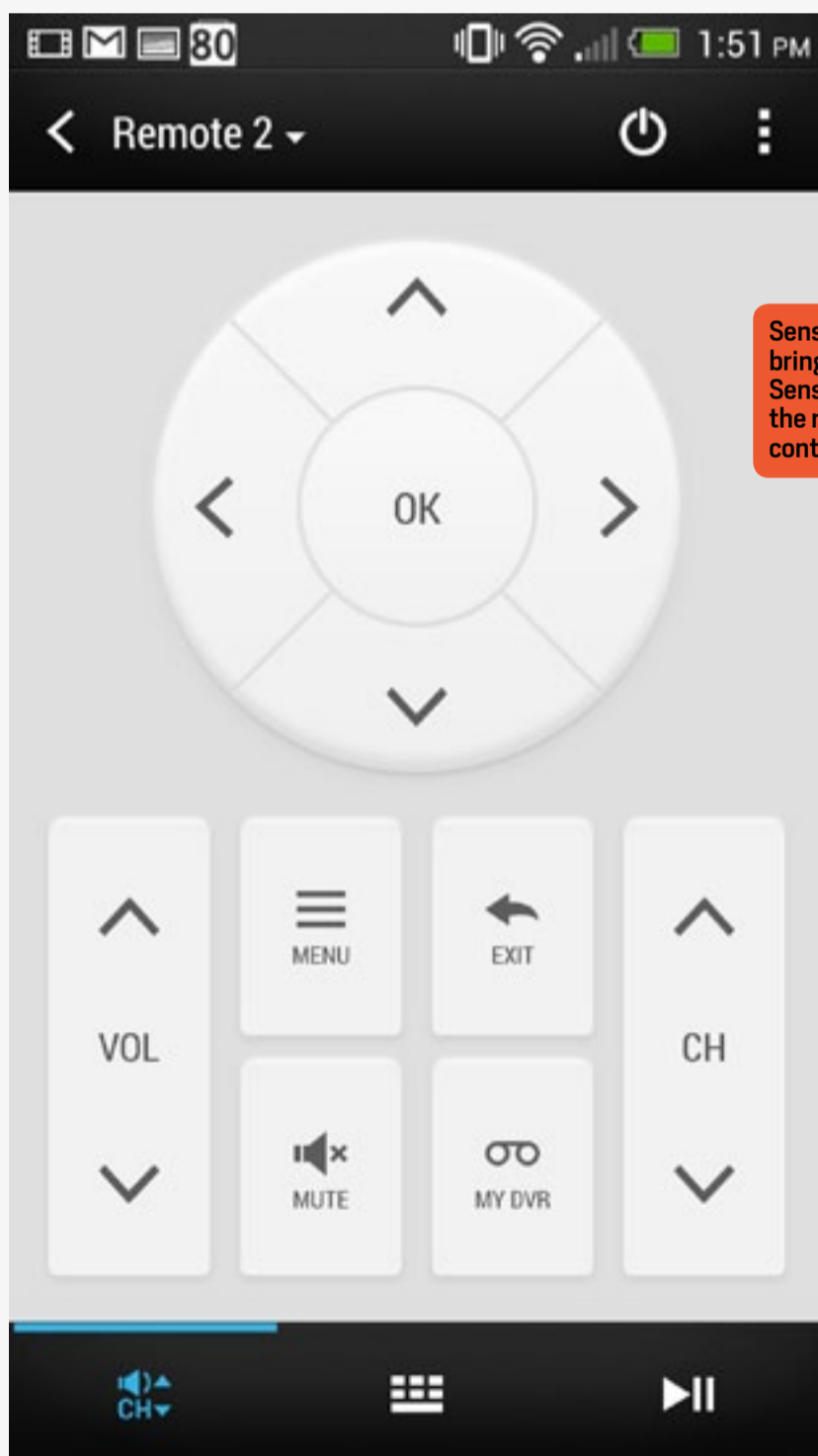


like a step backward to us, especially after the One X was updated to allow menu functionality on the recent apps soft key.

The most striking change in the UI is BlinkFeed, which takes over as the default home page. Thanks to its many tiles of various shapes and sizes, the tool is reminiscent of Flipboard, Motorola's Blur UI and even Windows Phone. (Dare we say it even brings back memories of the Microsoft Kin?) The

idea behind the service is to bring in content from your favorite publications and social networks — Engadget, Twitter, Facebook, LinkedIn and Flickr are just a few examples — and put it all together for easy browsing. In fact, the word “casual” should be the main focus here: outside the usual notification bar, BlinkFeed won't feature your emails or any other critical updates. If something of interest pops up in your feed, just tap on any tile to read the associated post or status update. There's also a modernized clock and weather widget at the very top, but it only shows up on the main screen — it disappears as soon as you start scrolling down into the depths of your feed.

Fortunately, you still have full control over BlinkFeed through a hidden pull-down bar nestled in between the tiles and clock widget, which is accessed by dragging your finger down on the starting page (you can also use this gesture to manually update your feeds, although you can set it to auto-refresh on mobile data and WiFi or WiFi-only). A tab on the left lets you pick and choose which feeds you want to look at; for instance, you can opt to view only updates from Engadget or go for the whole kit and kaboodle of topics that interest you. If you want to change which feeds are highlighted, just head to the settings, found in the BlinkFeed menu. Additionally, you'll also find options to post to Facebook or Twitter directly from this bar.



Sense 5 brings you Sense TV, the remote control app.



An SDK will eventually be offered so that devs can publish their apps to BlinkFeed as a means of making the service more useful. This is something we look forward to; the entire concept just feels like it's too drastic a shift from stock Android. Fortunately, in case you're not a fan of BlinkFeed being the default screen every time you unlock your phone — and let's face it, it's a huge departure from anything we've seen on Sense or Android in general, so it's not going to please everybody — you can choose a different home page. There doesn't appear to be any way to completely disable it, however, so you're stuck with it taking up one of your five main panels. This leads to our major frustration: while the idea behind BlinkFeed isn't terrible (and we imagine serial social networkers and news junkies may find it quite handy), it makes Sense feel a little too cluttered with unnecessary bloat and users should be given the option to disable it if they don't get any benefit out of it.

We should note that BlinkFeed's tiled layout isn't restricted to that main panel; it's actually a recurring theme in

BlinkFeed performs well, but it adds to the feeling of unnecessary bloat and can't be disabled.

the gallery as well. The app uses tiles to let you choose between your own photo galleries, your friends' Facebook albums and other online services like Dropbox and Flickr. When you go into your own photo albums, you may see a few images moving on their own — those *Harry Potter*-like movies hanging out in your once-stagnant album are Zoe shots. Each picture (Zoe or otherwise) can be starred as a “highlight” so you can show your friends and family the best images from last month's Disneyland vacation instead of, you know, *all of them*. You can also upload those precious memories to Zoe Share, a service that generates a URL displaying up to 10 photos which you can share with whomever you want — whether they're Zoe or plain, old stills. Each website is active for 180 days, in case loved ones or stalkers want to visit over and over.

Admittedly, Zoe Share is a much slicker feature than we first gave it credit for, but there's another clever way to share these five-second clips: the One can take your collection of Zoes and stills from that day and create a professional-style highlight reel complete with images, clips, special effects and music. There aren't a lot of song choices available yet, and you can't use your own music, but the stock tones offered are at least diverse. Each individual song comes with its own theme — one comes with an old-timey filter, for instance — and the pictures are synced almost perfectly with the music.



These 30-second movies can be uploaded to Zoe Share on a unique URL for 30 days, or it can be uploaded to other services such as YouTube. We had a hard time believing that the resulting movies weren't done by a human, but this is just one creative way to take advantage of the Snapdragon 600 chipset.

The main home panels on Sense 5 really aren't that different from what we saw on the previous version. The iconic Sense clock and weather widget is missing by default, but don't panic, fans — it's still offered as a widget, so long-press the main screen and you'll get the standard Sense setup that lets you pick out which widgets, shortcuts and apps you want. You may also notice that the font is different from Senses past, but it's actually Roboto, the stock font on Android 4.0+ (albeit, Sense uses a different weighted version). The notification bar uses the same setup as before, but it also takes advantage of the new font and a slightly modernized style.

Besides BlinkFeed and the gallery, the other area that received a major revamp is the app menu. The grids, which offer a more Holo-style look than the ones found on Sense 4, are aligned vertically instead of horizontally and come in two different sizes: 3 x 4 and 4 x 5. By default, the grid shows up as 3 x 4, and just as we saw on BlinkFeed, the Holo-style clock and weather widget take up the top row of icons on the very first screen (for either size). App placement is different here than on the stock

app tray: you customize your docking tray from here instead of the main screen, you can create or manipulate folders and another pull-down bar with tabs and settings sits between the app icons and clock. This tab allows you to change the grid organization to show alphabetical order or recent apps (folders are non-existent in these modes).

The One makes good use of the included IR blaster with Sense TV, a Peel-powered feature that blends a program guide and universal remote into one app. Stateside, Hulu Plus is integrated and all major cable services are supported; in the UK, Virgin Media, Sky, Freesat and Freeview will be included in the offerings. We'd love to see Netflix supported as well, but HTC hasn't announced any plans on that end yet, so we'll become more virtuous by exercising heaps of patience. (It's a win-win, really.)

As for the remote itself, it still works pretty well but not as flawlessly as the Optimus G Pro's iteration. It comes with a library of IR codes to support nearly any TV brand, cable service and home theater setup you can think of. The software guides you step by step as you attempt to get your phone properly set up with all of your equipment, even going as far as to tell you to align the One with your universal remote if it's unsuccessful at getting everything programmed correctly. Once you're ready to actually use the remote, your mileage may vary depending on your TV brand and cable provider. We weren't able to

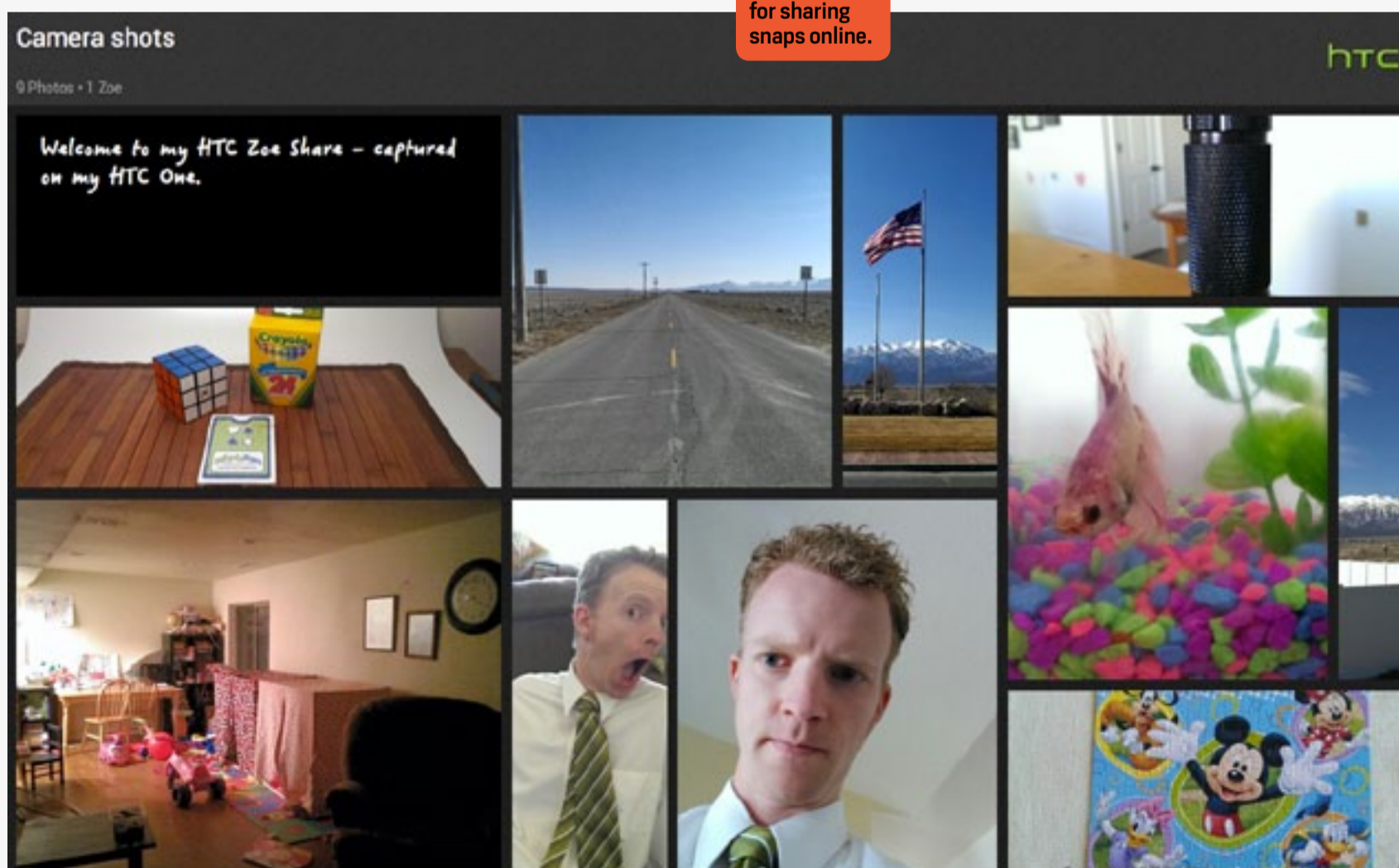


turn off the Dish DVR despite easily being able to control the menu, and a Hitachi TV recognized the input menu button on the remote, but refused to let us select any of the options in the menu. Aside from this little hiccup, everything worked as advertised. As another nice touch, you can access basic controls and recent channels in the notification tray, use the remote on the lock screen and even tell the app to remind you of upcoming TV shows in BlinkFeed.

Sense 5 also brings with it an updated HTC Sync Manager. This feature is primarily aimed at new users hoping to move their information from iPhones or other Android devices. If you're coming over from an Apple, you can use Sync Manager to go into iTunes and grab

your contacts, calendar appointments, photos, videos and music (DRM-free, natch). If you're coming from an older Sense device (3.6 or higher), you'll be able to transfer all of the above as well as texts, bookmarks and preferred settings. You can achieve similar results on other Android phones (2.3 and up) by installing an HTC app from the Play Store, whereas any other devices can still transfer contacts the old-fashioned way — via Bluetooth. Sense 5 also makes it possible to store encrypted backups on your Dropbox account (or Sina, if you're in China), which is then tied to your Facebook creds. Using this method, you can back up all of your settings, apps, widgets, BlinkFeed, TV, home screen lay-

Zoe Share offers a custom URL for sharing snaps online.



out and account information.

Finally, HTC's partnered up with Zoodles to add Kid Mode. The app serves as a password- or gesture-protected launcher that your children won't be able to exit. Once enabled, you have the ability to restrict which apps your children use, while also offering a place to make drawings and read storybooks. Speaking of storybooks, the service lets you record stories via the front-facing cam, so your kids can watch you read *The Three Little Pigs* to them, even if you're out of town. There's also a video mail feature that allows you and your young 'uns to exchange messages back and forth to each other.

Since your offspring are likely all sorts of ages, each individual child can have their own specific mode in which their favorite apps and preferences (along with your own parental customizations) pop up. As a parent, I found the service to be incredibly handy — it's no secret that kids have just as intense a love for electronic gadgets as we do, so it's important to keep them (not to mention our personal data) safe as they play with our phones.

PERFORMANCE AND BATTERY LIFE

Outside of that stunning design, the star of the show is the One's Snapdragon 600 (APQ8064T) chipset, which pairs a 1.7GHz quad-core CPU with an Adreno 320 GPU and 2GB RAM. This particular piece of silicon is the next logical step up from Qualcomm's Snapdragon S4 Pro

(APQ8064). The CPU features Krait 300 — a bump from the S4 Pro's Krait 200, which results in a 15 percent improvement in instructions per clock (IPC) and a “speed-enhanced” Adreno 320 GPU. The 600 is also built using a 28nm process, just like the S4 Pro, and offers support for LPDDR3 — even though the One uses LPDDR2 specifically — and 802.11ac support on the WiFi side (in addition to the standard suite of a/b/g/n). This is the same chipset used in the LG Optimus G Pro and ASUS PadFone Infinity, and doubtless countless more over the next few months. It won't stay king of the Snapdragon hill for long, since Qualcomm expects the 800 to be available in mid-2013.

Still, the fact is that, as of this writing, the Snapdragon 600 is the strongest processor on the market, and the benchmarks — as you'll see in the chart below — indicate a solid improvement over the S4 Pro chip. We've compared the One with its predecessor, the One X+, as well as the S4 Pro-powered Droid DNA and Snapdragon 600-powered Optimus G Pro, so take a look at how the One holds up.

It shouldn't be much of a surprise to see the One edge out HTC's older flagships, but it also handily beat the G Pro in all but one benchmark (SunSpider). Since the silicon itself is essentially the same, this likely indicates that Sense 5 is more optimized than LG's Optimus UI. In any case, the differences aren't visible to the naked eye. When they're both that



BENCHMARK	HTC ONE	HTC ONE X+	HTC DROID DNA	LG OPTIMUS G PRO
QUADRANT 2.0	12,495	7,457	8,028	12,435
VELLAMO 2.0	2,429	1,897	1,752	2,254
ANTUTU 3.1	25,140	15,832	14,474	19,300
SUNSPIDER 0.9.1 (MS)	991	1,107	1,150	904
GLBENCHMARK EGYPT 2.5 HD OFFSCREEN (FPS)	34	12	31	27
CF-BENCH	25,267	14,558	18,386	20,019

SUNSPIDER: LOWER SCORES ARE BETTER

good, tiny discrepancies in performance just aren't as noticeable: but for what matters most, the One definitely does the job, and does it well. It runs buttery smooth and the screen is quite responsive. We strained our eyes looking for any sort of lag with no success and the graphics in games like *Shadowgun*, *Asphalt 7*, *Real Racing 3* and *Riptide* are as quick and detailed as we've come to expect with high-performance phones, if not just a little bit more so. (This reviewer's personal performance when playing games, however, is a completely different story.)

The One's 2,300mAh battery is a solid improvement in size over previous flagships — the One X used a 1,800mAh cell, while the One X+'s was beefed up to 2,100

— so we were hoping to see a measurable boost in how long its battery held up. Now for the moment of truth: in our rundown endurance test, in which we play an HD video on endless loop, the One made it through six and a half hours before all of its juice was sucked dry — an average result. As a disclaimer, our initial real-world usage tests were conducted on AT&T's 1900MHz network, which admittedly doesn't offer consistent HSPA+ speeds in our area; with this in mind, we got almost nine hours of constant use, which consisted of emailing, social media, taking pictures, making a few calls and an assortment of other random activities.

On the UK's EE LTE network, we were picking up download speeds around 10 Mbps, while uploads were often even higher, circling around 22 Mbps during our tests in central London. Further afield, however, it was closer to those 10 Mbps down speeds. During a standard day's use on LTE (including a heavy-use

We got almost nine hours of battery life with constant use.



three-hour stint in a hospital waiting room), our European review model powered down just after eight hours' use.

As flashy as the One is, it's an actual phone first and foremost — and even this aspect of the device is specced out to the max. HTC has thrown in a pair of HDR microphones designed to cancel unnecessary

background noise and handle a wide range of sound levels without saturating. Call quality was solid, but what really stood out to us was what we didn't hear. At one point in a recent conversation, we told the person on the other line to excuse the UPS truck passing by right behind us; our friend couldn't even tell

Phone calls are clear and have quality noise cancellation.



that anything was in the background, let alone a noisy truck.

Remember those stereo speakers taking up all that room on the front of the One? They're the best set of external speakers we've heard on a phone so far, and as afraid as we are to admit this, Beats Audio may have something to do with it. HTC's BoomSound technology makes it so you don't have to use earbuds or an on-ear headset to take advantage of the various codecs Beats has to offer. If you don't want to annoy others — and why would you? — the phone uses the same 2.55V headphone amp used in the Droid DNA, giving you similar bass levels even when you're not listening through the speaker. In any case, if you do decide to go the no-headphone route, the result is a much fuller audio experience. Not only that, we cranked the volume as loud as it could go and we couldn't hear any distortion whatsoever.

WRAP-UP

Regardless of how well Samsung's new flagship does on the market, we'll continue to have a soft spot for the One. Last year, we were very impressed by the One X, but that wasn't enough. HTC pushed itself and made its sequel even more polished than the original. We love the phone's industrial design and the camera, while the Snapdragon 600 chipset and 1080p display aren't bad either. We're not sold on every aspect of Sense 5, such as BlinkFeed and the One's two-button layout, but overall the user experience is much improved. As far as we're concerned, HTC has a hit on its hands. **D**

*Myriam Joire and Mat Smith
contributed to this review.*

*Brad is a mobile editor at Engadget,
an outdoorsy guy, and a lover of
eccentric New Wave and electro.
Singer and beatboxer.*

BOTTOMLINE

HTC ONE £520



PROS

- Gorgeous design
- Camera does very well in low light
- Powerful quad-core Snapdragon 600 chip
- Stunning 4.7-inch, 1080p display
- Clever features like Zoe Share and highlight reel

CONS

- A few aspects of the Sense 5 UI feel like a step backward

BOTTOMLINE

HTC's latest flagship is the company's best effort to date. Its beautiful design, great display and solid performance have convinced us that the One is among the finest phones you can buy.





SXSW in Pictures

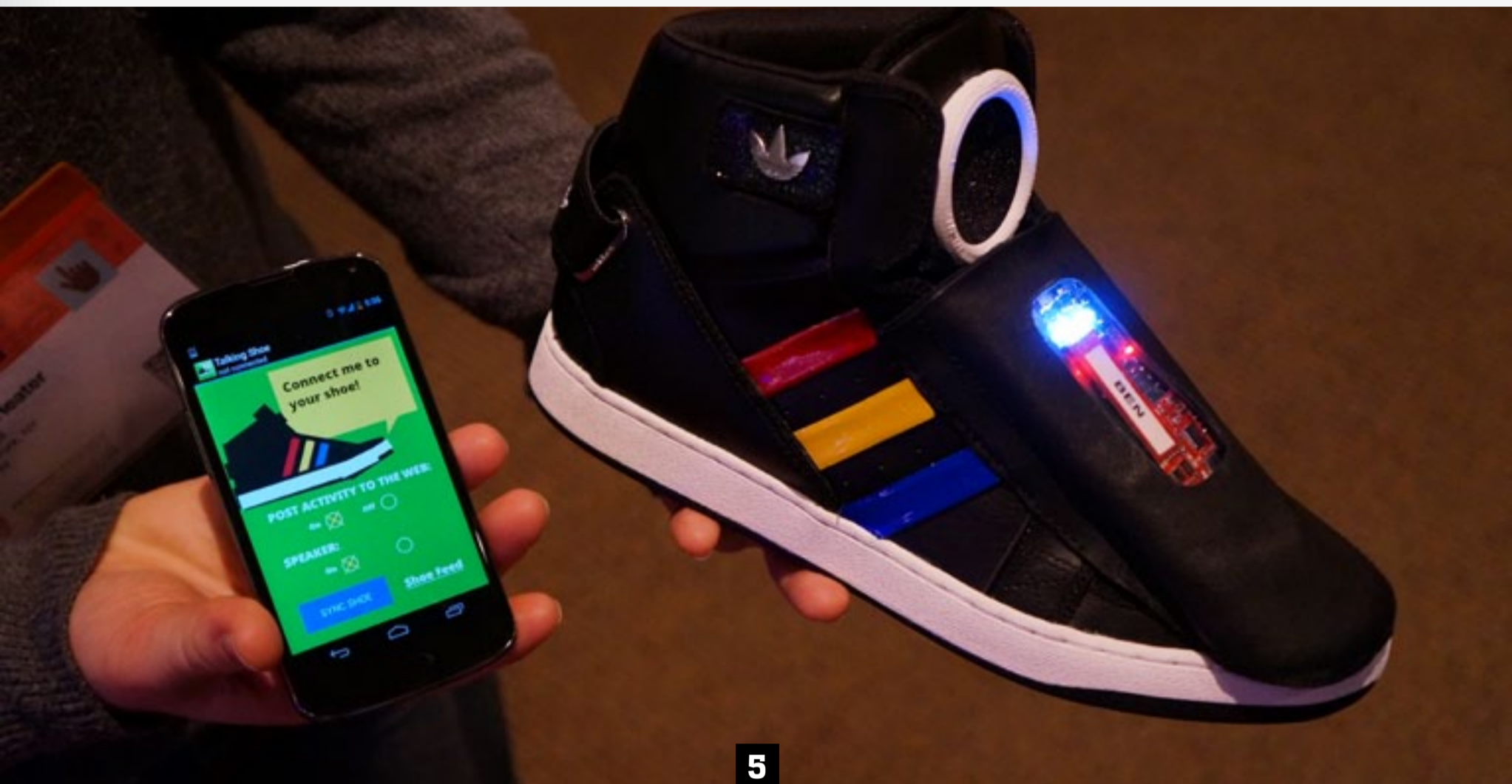
South by Southwest is a strange and wonderful thing. Gone are the business-suited meetings of traditional trade-shows and their ilk, trading in ties for a vibe more in line with Austin's proud weirdness. In place of the formal business dinners and boring press conferences are house parties and conversations with luminaries like Elon Musk. It's a chance to rub elbows with developers and artists, all at the same time. There's a focus here on disruptive technology, rather than the manner of iterative evolution that's so prevalent in this industry — consumer 3D scanners, motion controllers, mind-controlled headphones, robotic baristas. Oh, and the parties are pretty good too, we're told...

— *Brian Heater*



1. Our branded, 3D-printed latte. 2. The Firefox wouldn't dare miss the festivities. 3. Who doesn't like nerdy coffee drinks? 4. Observing the robotic barista process.





5



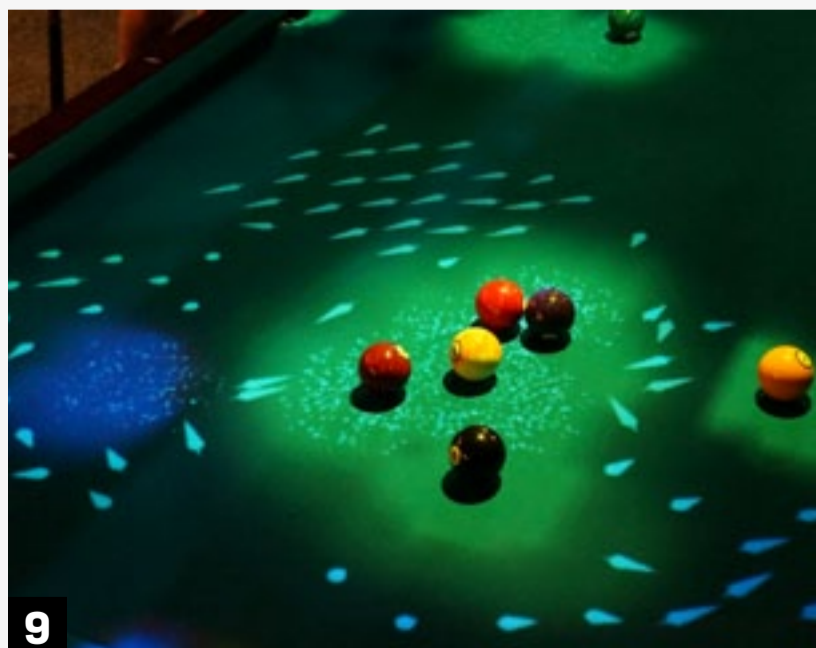
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8



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5. Google's speaking shoe hack. 6-7. TI's LaunchPad-based prototype mouse and LED matrix. 8-9. OpenPool spices up billiards with a Kinect-powered light show.

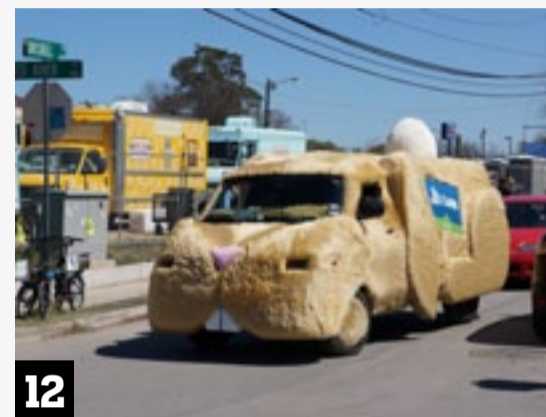




10



11



12

10. PSY helps Korean startups. 11. gdgt SXSW meet-up. 12. TaskRabbit's mobile... well, rabbit.



13



14



15



16

13. Everything was cool until this guy showed up. 14. Cube 3D printers in action. 15. Sonos' outdoor stage. 16. All of your iPhone cameras are belong to Clashot.

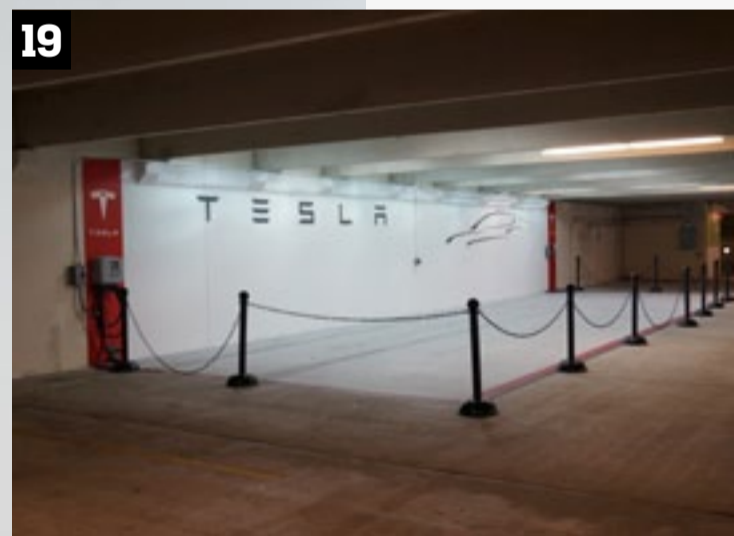




17



18



19

17. Tesla's Roadster and Model S get cozy. 18. The charging station is primed for refueling. 19. "Excuse me, this area is reserved. Thanks!"



MAY

This weekend, 10 teams of hopeful hardware designers and engineers will descend on San Francisco's Fort Mason to battle for the top spot in our first-ever Insert Coin: New Challengers competition. Industry

THE

heavyweights along with our editors and readers will all come together to choose the next big crowdfunded project, with the winner taking home a cash prize and the official Engadget review treatment.

BEST

With projects ranging from a Bluetooth-enabled oximeter to an aquatic drone and \$25,000 at stake, the game is officially on. Herewith, a closer look at the big contenders.

GADGET

BY CHRISTOPHER TROUT

WIN!



FINALIST:

Make-a-Play

THE MAKER: Gal Sasson

Put down that Speak & Spell, son. There's a new toy in town and it's packing an Arduino. Make-a-Play is a souped-up puppet show stage, focused on changing children's relationships with their gadgets. As opposed to

the typically passive engagement provided by the boob tube, this modular plaything puts kids in the maker's seat. In its current, wooden state the stage uses everyone's favorite microcontroller as a brain; two motorized carts that send the handmade creations sailing across

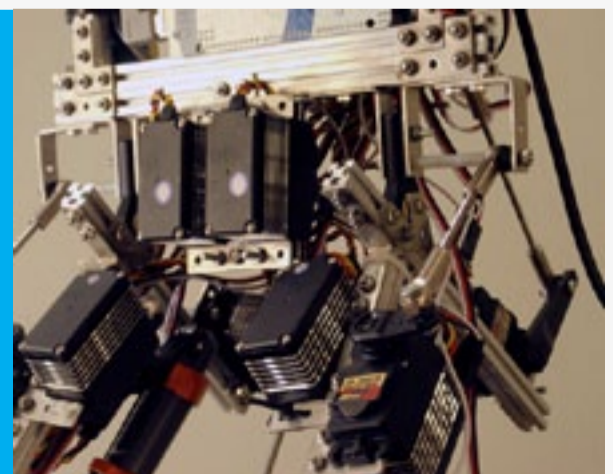
the stage; and a collection of knobs and switches for adjusting lighting and voice recording. Each unique performance can be recorded and uploaded to a computer for manipulation and playback, bringing a new level of accuracy to a repeat performance. The toy's inventor, Gal Sasson, a 30-year-old NYU graduate student, drew on his childhood in northern Israel where he says open spaces encouraged creativity. "Sure, we loved video games and remote-control cars but we knew there was something else," Sasson said. "We knew that we could use our imagination to create our own games."



SEMIFINALISTS:

cSPRING

According to the creators of the cSpring Biped Educational Development Kit, this robot was created to "level the playing field between universities," by offering students an affordable bipedal robot for testing.



FINALIST:

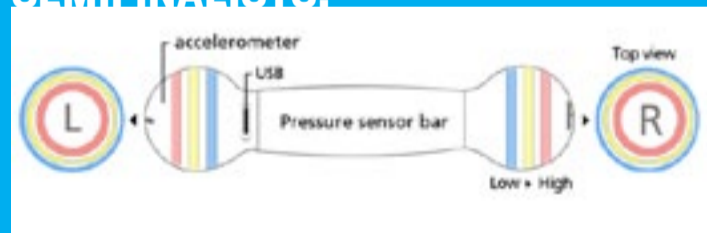
Smart Knob

THE MAKERS: Arnold Peterson, Clark Li, Jinean Ji, Marc Goupil, Merrick Lackner

The concept for Smart Knob has some seriously cold roots. According to Clark Li, co-founder of Rently.com, the need for the aspiring key killer occurred to him as he and his family waited for more than an hour in the snow in Big Bear, Calif., for a property manager to give them access to their vacation rental. No one (at least not in their clan) suffered frostbite that day, but the Smart Knob was born. The device hooks up to a standard circular dead-bolt and uses a keypad to give property managers control of who can enter their home. Once the code is set, the manager can then provide the PIN remotely or

through an automated call-in system. According to its inventors, the device can be installed in less than a minute and runs on a battery that lasts “up to two years.”

SEMIFINALISTS:



HODU

Hodu, Korean for “walnut,” is a “zero-failure” physical therapy tool that rewards patients with flashing lights for even the slightest physical feedback.



FINALIST:

Snapzoom

THE MAKERS: Daniel Fujikake, Mac Nguyen

Mac Nguyen says his friends call him “MacGyver,” and after seeing the smart-phone accessory he created with his brother-in-law, Daniel Fujikake, we’re inclined to believe him. Snapzoom uses a relatively simple pair of self-centering clamps to connect just about any handset to just about any optical scope, multiplying the focal length of your smart-phone snaps. In a perhaps stereotypically Hawaiian turn of events, the device was conceptualized when Fujikake held his binoculars up to his phone to get a closer shot of Nguyen learning to surf.



SEMIFINALISTS:

MOEDLS

This project aims to put 3D scanning in the palm of your hand with a relatively small custom enclosure, lasers and accompanying iOS and Android apps.



**FINALIST:**

SmartPulse

THE MAKERS: Dimitri Albino, Harold Timmis, Raffaele Iannello

What's that? You've been dying for a hackable Bluetooth-connected pulse oximeter? Okay, so it may not be at the top of your list of dream devices, but SmartPulse has the potential to (quite literally) put your hemoglobin saturation rates at your fingertips. Unlike many pulse oximeters on the market today, the device connects to your smartphone via Bluetooth 4.0 and uses a free app (currently available on iOS and Android) to provide users with the desired stats. The folks

at SmartMaker are currently in the process of completing an API for the teeming hoards of health hackers out there. SmartPulse will cost \$49 when it hits store (hospital?) shelves.

**SEMIFINALISTS:****OBSERVOS**

An Atmel microcontroller and collection of environmental sensors are used to supply users with information about temperature, humidity and barometric pressure.



**FINALIST:**

Ziphius

THE MAKERS: António Câmara, Miguel Gomes, Edmundo Nobre, Cristina Gouveia

Just when you thought you were safe in your sea castle, Azorean's created an aquatic drone that can be controlled with



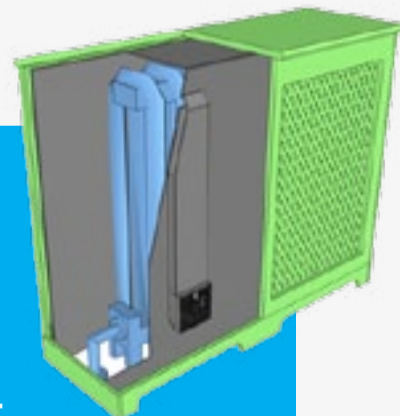
an iOS or Android app. According to the folks behind Ziphius, this drone wasn't created in the interest of

maritime warfare, but rather underwater exploration, with a focus on mass-market adoption. On the technical side, the driving force behind this sea-worthy gadget includes a Raspberry Pi, an Arduino-based plate, an HD camera and a pair of motors. **D**

SEMIFINALISTS:



RADIATOR LABS

A seemingly simple radiator enclosure attempts to take climate control out of your landlord's hands and allows you to adjust the temperature of an individual heating unit.



Let's Go Places



  #LetsGoPlaces Places you never imagined.

Concept car shown. ©2013 Toyota Motor Sales, U.S.A., Inc.



**Let's
Go
Places**

ESC

DISTRO
03.15.13

VISUALIZED

**TOP TECH IN
THE FIELD**



PHOTOGRAPH BY MARK THIessen/NATIONAL GEOGRAPHIC STOCK

ESC

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03.15.13

VISUALIZED

TOP TECH IN THE FIELD



No, the Emerald Isle isn't harboring renegade space cows, (but we secretly wish it was). According to *New Scientist*, these high-tech heifers are part of a study by Teagasc, Ireland's Agricultural and Food Development Authority. Cows and other ruminants are thought to account for one-fifth of the world's methane, but in order to refine that number, direct-detection devices have been put into place. While this study may ultimately help in protecting the ozone layer, it seemingly turns an ordinary County Cork cud-chewer into a cyborg-bovine capable of proclaiming, "All your fields are belong to us."



PHOTOGRAPH BY MARK THIESSEN/NATIONAL GEOGRAPHIC STOCK



JIM BUCZKOWSKI



**FORD'S DIRECTOR
OF ELECTRICAL AND
ELECTRONICS SYSTEMS** talks
about increasingly tiny tech
and his 007-style dream car

What gadget do you depend on most?
Anything I can carry with me any-
where. Currently an iPhone, but

I'm always looking for the next
great "take it with me" experience.

**Which do you look back upon
most fondly?**

A science fair project that I tried
to build back in high school. It
was a DIY version of the Pulsar
digital watch. Unfortunately it
didn't end up looking — or work-
ing — like the Pulsar.

**Which company does the most to
push the industry?**

I think Google's strategy con-
tinues to push the boundaries
because their open approach en-
ables anybody to innovate. Disney
/ Pixar / ILM are also doing some
amazing stuff.

**What is your operating system
of choice?**

OS doesn't matter; it's the expe-
rience that counts. I like the ex-
periences I currently have across
my Apple ecosystem.

**What are your favorite gadget
names?**

Roku, Slingbox, TAG, Nest.

What are your least favorite?

i-Anything. Getting tired of "i."



Which app do you depend on most?

Starbucks and Key Ring. Lately I've been using TripIt and Concur to help me keep my travel plans organized.

What traits do you most deplore in a smartphone?

I have fat fingertips, so touch-screen keyboards.

Which do you most admire?

Screen size and PPI (pixels per inch) wrapped in a precise design.

What is your idea of the perfect device?

I really love it when technology takes a day-to-day experience that you loathe and simplifies it, turning it into something personal that you can love and want to show your friends.

What is your earliest gadget memory?

TI-55 calculator and then my

HP-16C programmer's calculator that could work in hexadecimal, decimal, octal and binary and was RPN (Reverse Polish Notation).

What technological advancement do you most admire?

The integrated circuit and microelectronics. IC design and process technology has been at a blistering pace for 30-plus years and has enabled so many great advancements from entertainment to medicine. Twenty-two-nanometer transistors, billions of devices on a square of silicon the size of your fingernail and it doesn't seem like it will slow down. This reinforces the belief that anything is possible in the future.

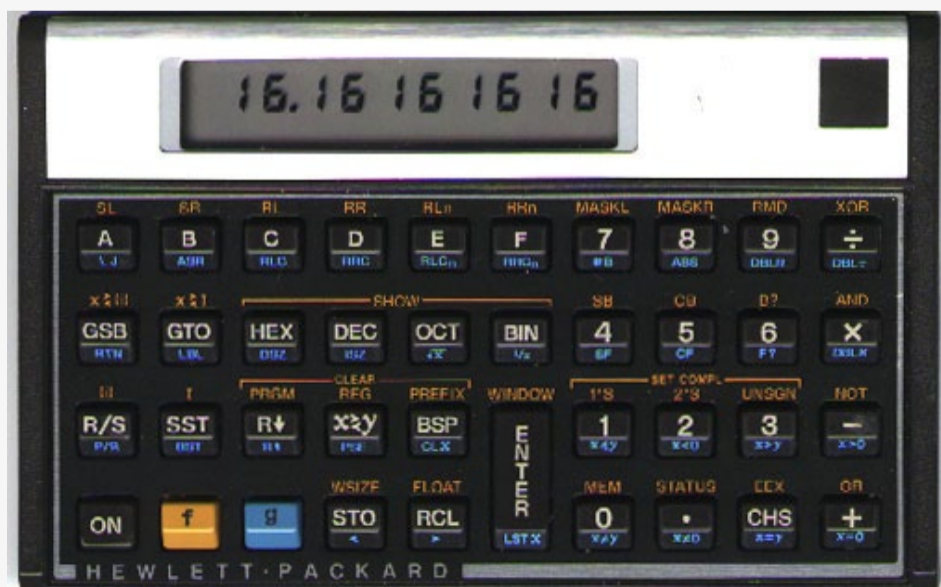
Which do you most despise?

Television user interface. Nobody has really figured it out yet. We just keep throwing content at consumers through big screens, apps and the internet, but I don't think anyone has created a truly integrated and immersive experience.

What fault are you most tolerant of in a gadget?

The need for a software update. I like it when I buy something and I can always have the opportunity to make it better / relevant.

A classic computer programmer tool of the trade, the HP-16C calculator.





Which are you most intolerant of?

Poor response time and also network-service dead zones.

When has your smartphone been of the most help?

In a foreign country when I've been lost. Google Maps!

What device do you covet most?

An Aston Martin V12 Vantage Coupe, because I'll probably never have one.

If you could change one thing about your phone what would it be?

A way to keep it secure without having to enter in a password.


What does being connected mean to you?

Having the world, people and all the knowledge around us just a few clicks away.

When are you least likely to reply to an email?

When I'm with the boss, our CEO Alan Mulally! It's about the only time I'll turn a device completely off to prevent any temptation.

When did you last disconnect?

I'm not sure it's really possible to disconnect. It's like TiVo; when you reconnect, it's all waiting for you anyway. 

“I'm not sure it's really possible to disconnect. It's like TiVo; when you reconnect, it's all waiting for you anyway.”



IN REAL LIFE is an ongoing feature where we talk about the gadgets, apps and toys we're using in real life.

SCANNER PRO APP BY READDLE



Mophie's
Juice Pack
Helium for
iPhone 5



Native
Union Pop
Phone

When it comes to scanning old images and legitimately important paperwork, I'm the kind of guy that still falls back on conventional scanning machines. The Doxie Go is my latest crush, as it's small, yet functional, and plays quite nicely with cloud storage facilities like Dropbox and Google Drive. But for the quick-and-dirty jobs, Readdle's Scanner Pro (\$6.99) is a solid option for iPhone owners.

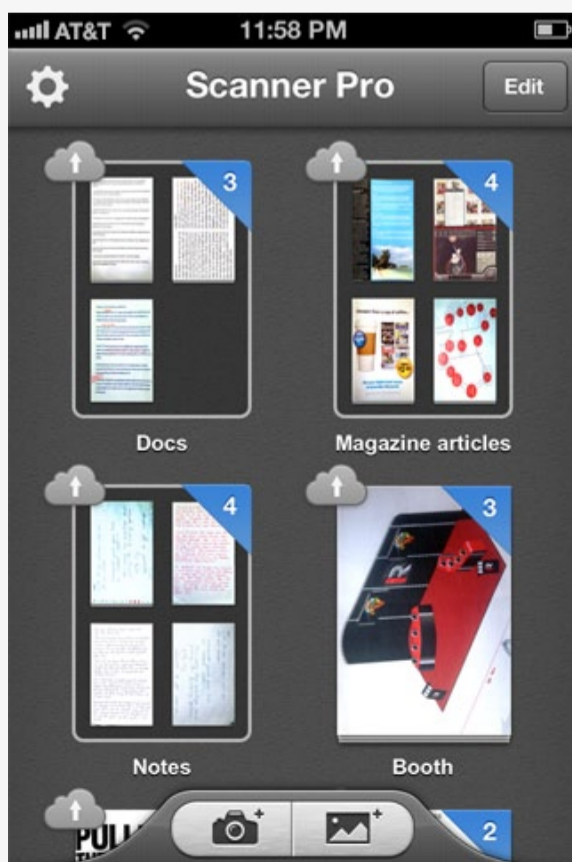
In essence, the app relies on your camera to snap an image of something you want scanned. From there, it auto-detects the borders (poorly, in my experience — I just ended up selecting the entire capture), and auto-

matically creates a multi-page PDF if you keep snapping. It optimizes paperwork to bring out text and diminish page bends and the like, and there's a compression option in Settings that works

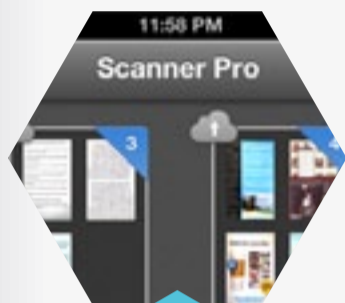
well to keep file sizes in check. I was able to set it up to sync to Evernote, Dropbox, iCloud and Google Drive, but power users could select even more.

Naming individual scans and creating folders couldn't be easier, and those with iPads will appreciate seeing iPhone scans pop up on their tablets courtesy of cloud syncing. It does its job reasonably well. I'd recommend exiting the app between each multi-page document creation and upload, as I ran into a consistent crash otherwise. But here's the thing: the app needs to integrate (or merge) with SignEasy. The major thing it's missing is the ability to digitally sign contracts. Moreover, I use the free Concur app to photograph all of my business receipts, which gives me one less reason to rely on a third-party program. If your company doesn't have something like Concur, however, this one's a good alternative. The creators are also highly responsive to feedback, so it gives me confidence that it'll only continue to get better.

— Darren Murph



MOPHIE'S JUICE PACK HELIUM FOR iPhone 5



Scanner
Pro App by
Readdle



Native
Union Pop
Phone



People familiar with my personal preferences could easily tell you all about my dislike for smartphone cases — because why would anyone want to cover up such pretty things, right? Still, I understand there may be occasions where a little extra power (or protection) is needed. And given that my iPhone 5 isn't a mAh powerhouse like the Galaxy Note II, I figured now would be the perfect time to try one of the first battery cases to be compatible with the iPhone 5.

Here's where the Juice Pack Helium comes in. Mophie's iPhone 5 companion promises between six to seven hours of additional runtime on both WiFi and cellular, making it desirable for pretty much anyone who dreads that low battery percentage. The great news is the Helium works as advertised, or at least comes very close.

It's been part of my everyday kit for weeks now, and during that time I've faced scenarios where the iPhone would be on its last legs with about a 3 to 4 percent charge, only to have the Helium come to the rescue and seamlessly bring it

back up to about 80 to 85 percent. Cosmetically speaking, Mophie did a solid job of keeping the Helium lightweight, although that's eclipsed somewhat by the half-inch of length it adds to my iPhone. That being said, nothing was more tedious than having to carry a dongle in order to access my iPhone 5's headphone jack, which means I now have to remember to carry one extra thing in my bag — yes, I could easily take off the case (or use a different pair of headphones) and keep my hands-free tunes / calls going, but doesn't that defeat the purpose?

Leaving the nitpicking behind, though, the Juice Pack Helium is a pleasure to use because, well, it does exactly what it's supposed to do. Better yet, it does it without much hassle, and without making my jean pockets feel like they could burst at any given moment. And while its \$80 MSRP may seem a little steep, chances are the Helium's stupendous performance will make it worth it — especially since the selection of similar cases is still rather limited.

— Edgar Alvarez



NATIVE UNION POP PHONE

One of my oldest friends (in terms of tenure, not age!) surprised me with a present earlier this month. After tearing open the unexpected UPS delivery, I found myself in possession of Native Union's retro-styled Pop Phone. And while it depresses me to refer to something I used well into adulthood as "retro," there's no denying this cell phone attachment harkens back to a simpler time.

As you can see, the Pop Phone mimics the form factor of those old-school, wired telephones of yore — the ones on an end table or permanently installed on the wall, possibly next to a tape-based answering machine. The one I grew up with was bright yellow and nailed to the side of the kitchen cupboard. In fact, I

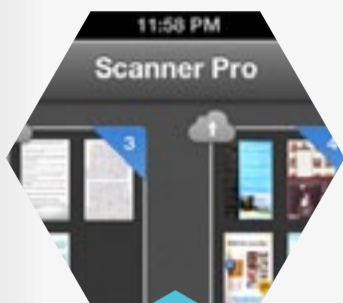
spent countless hours on that phone talking to the very friend who sent over the Pop Phone (hi, Kathleen!). And while there are plenty of wired and wireless headsets that

would do as good a job or better, I do admit feeling a bit nostalgic when using this \$30 attachment.

Yes, it's a bit impractical and no, my wife won't let me take calls on it in public, but it is a functional and comfortable handset. And as I look down the bulleted list of features on the back of the box, I remember it does almost everything Native Union says it will do. It's much easier to hold in place with my shoulder so my hands are free to type, and it lets me search for stuff on my Nexus 4 while I'm talking. Again, those aren't groundbreaking features, but I wasn't expecting much from a cell phone accessory in the first place.

Of course, it's not perfect. Despite the retro look and solid build, the Pop Phone is coated in a modern soft-touch paint that somehow isn't as inviting to me as the high-gloss, yellow contraption of my childhood. Also, despite claims of a high-quality speaker and mic, both are merely average for these types of accessories. Incoming and outgoing voices are perfectly audible, but it's not exactly what I'd call crystal-clear sound. That said, I do find myself listening to a disturbing amount of music through its tinny speaker. It sounds exactly like being on hold with a customer service department — only with far more Soundgarden.

— Philip Palermo



Scanner
Pro App by
Readdle



Mophie's
Juice Pack
Helium for
iPhone 5



The week that was in 140 characters or less

RSS Sunset, Mars Death Wish and Swapping Styles

DISTRO
03.15.13

ESC

REHASHED

@khanlou

Maybe we can kickstart google reader into not sunsetting

@arikia

“I’d like to die on Mars, just not on impact.” Elon Musk #sxsw

@mg

The transition from SXSW Interactive to Music is like the changing of the guard except we’re exchanging startup tees for tattoos & wayfarers

@bheater

Matt & Kim just shouted out Dell. SXSW has hit terminal velocity.

@ditzkoff

By getting people to stop tweeting about #SXSW, this new pope has already performed his first miracle.

THE STRIP

BY SHANNON WHEELER

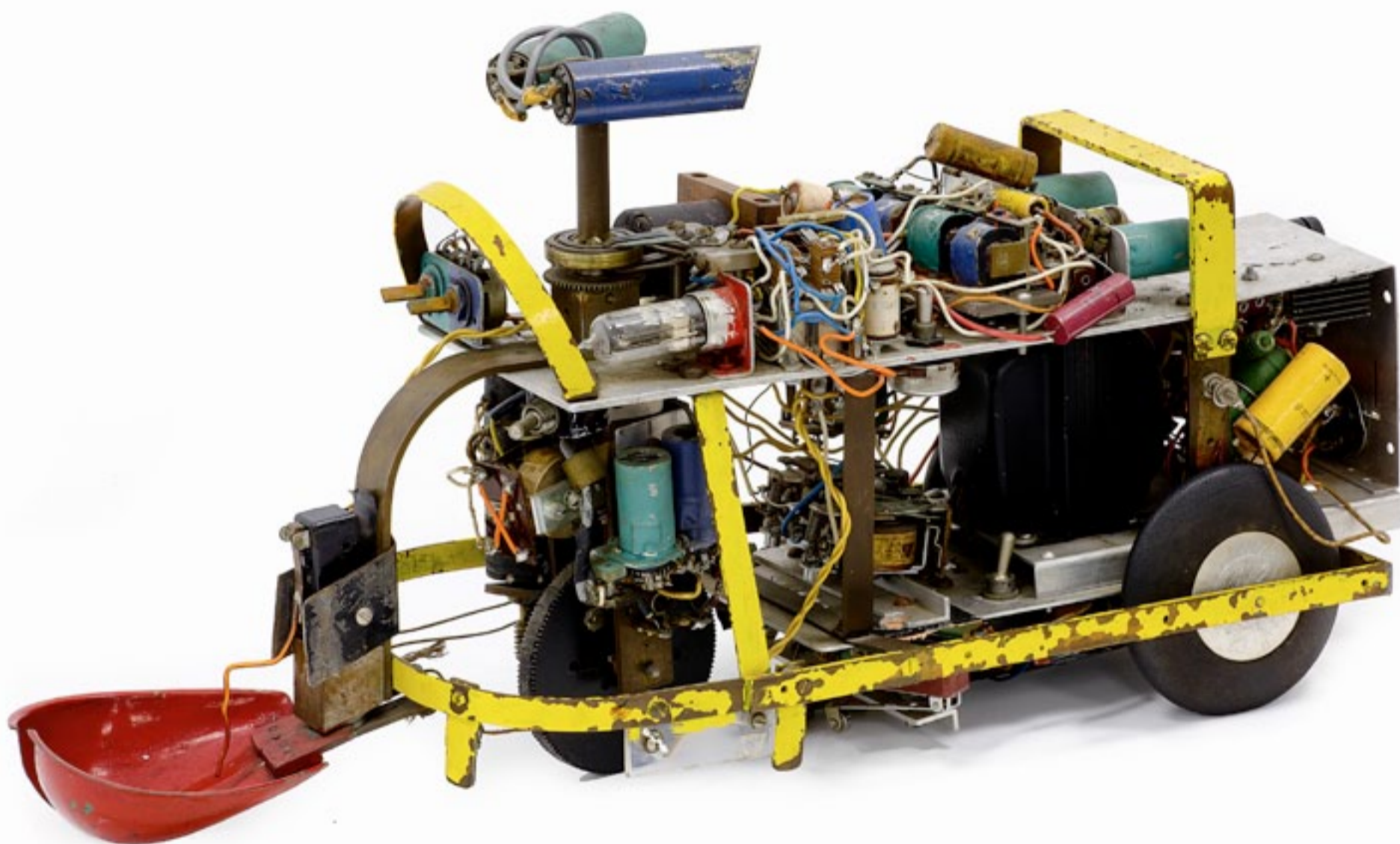


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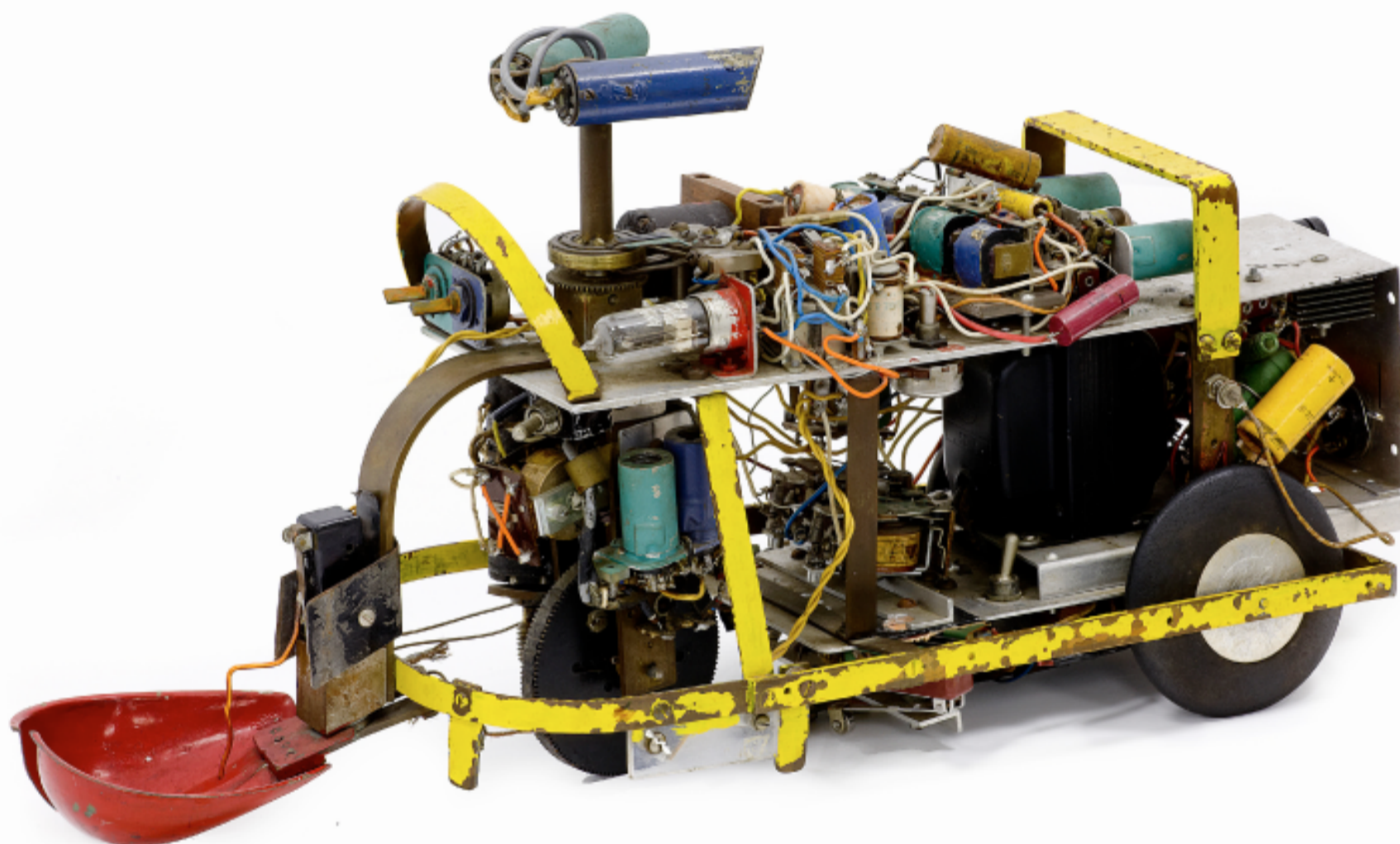
TIME
MACHINES

WHAT IS THIS? 
TOUCH TO FIND OUT



PHOTOGRAPH BY MARK RICHARDS. COURTESY OF THE COMPUTER HISTORY MUSEUM



**SQUEE:
THE ROBOT SQUIRREL**

Edmund C. Berkeley, computer scientist and author, wanted to “stir people’s interest in the extraordinary possibility of robots.” So, in 1950 he began construction of Squee, an electronic robot squirrel, whose sole mission was to collect “nuts” and bring them home. The nuts were usually golf balls and it foraged by way of phototube eyes, which sought out a static light source that was projected near a ball. After scooping it up, Squee would be prompted to return to home base by a strobe light, where it would deposit the ball and return to its nut-hunting and robot-promoting duties.

PHOTOGRAPH BY MARK RICHARDS. COURTESY OF THE COMPUTER HISTORY MUSEUM





Don't miss these amazing speakers

Chris Anderson
CEO, 3D Robotics and
former editor-in-chief, Wired

March 16-17, 2013
Fort Mason, San Francisco

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